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SUBJECT: NUCLEAR REGULATORY COMMISSION (NRC) INDEPENDENT CONFIRMATORY ANALYSIS OF WESTINGHOUSE AP600 PIPING SYSTEMS

Dear Mr. Liparulo:

The NRC Civil Engineering and Geosciences Branch (ECGB), with technical assistance from the Brookhaven National Laboratory (BNL), performed an independent confirmatory piping stress analyses on the AP600 design. The purpose of these analyses is to verify the adequacy of the computer program used by Westinghouse to generate the sample piping analyses. The confirmatory analyses conducted by BNL duplicate the Westinghouse sample analyses but use an independently developed and verified computer code. The adequacy of the Westinghouse computer program will be assessed by a direct comparison of the Westinghouse and NRC staff results.

Enclosed is the draft report documenting the results of the NRC independent confirmatory piping stress analyses. The results of the analyses were compared against the results of the sample problems analyzed by Westinghouse using their computer program. The comparison of results indicates that in some cases, the staff acceptance criteria were not met. Further review and discussions with Westinghouse are needed in order to identify the source of the difference and resolve the issue.

The staff requests Westinghouse to contact the staff to arrange a meeting to discuss this issue. If you have any questions regarding this report, please contact me at (301) 415-8548.

Sincerely,

original signed by:
Diane T. Jackson, Project Manager
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Office of Nuclear Reactor Regulation

Docket No. 52-003

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Docket No. 52-U03
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DRAFT

**NUREG/CR-6414
BNL-NUREG-52487**

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**PIPING BENCHMARK PROBLEMS FOR THE WESTINGHOUSE AP600
STANDARDIZED PLANT**

by

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November 1995

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Enclosure

ABSTRACT

To satisfy the need for verification of the computer programs and modeling techniques that will be used to perform the final piping analyses for the Westinghouse AP600 Standardized Plant, three benchmark problems were developed. The problems are representative piping systems subjected to representative dynamic loads with solutions developed using the methods being proposed for analysis for the AP600 standard design. It will be required that the combined license licensees demonstrate that their solutions to these problems are in agreement with the benchmark problem set.

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EXECUTIVE SUMMARY

The NRC staff has identified piping and pipe support design as one technical area where engineering information in sufficient detail can not be provided for the Westinghouse AP600 standard design to allow the staff to make a final safety decision under the rules of 10 CFR, Part 52. For this and similar areas the staff will use design acceptance criteria (DAC) verified by inspections, tests, analyses, and acceptance criteria (ITAAC) to enable the final safety determination. One element of the piping DAC requires the combined license (COL) licensee to verify the sufficiency of the computer codes and modeling techniques to be used to complete its piping stress analyses. To provide the basis for this verification, the staff developed an AP600 specific piping benchmark program. The COL licensee will be required to develop solutions to the benchmark problems and to demonstrate that those solutions meet the acceptance criteria specified in this benchmark program report.

The benchmark program consists of three piping problems involving two piping systems representative of the AP600. One system represents the Pressurizer Surge Line while the other represents the Main Steam Line Loop 2. The problems provide analytical benchmarks for three analysis methods, the uniform support motion response spectrum method, the independent support motion response spectrum method, and the modal superposition time history analysis method. Response of the pressurizer piping is developed using the response spectrum methods while the time history method is applied to the main steam line. In all analyses the excitation functions are representative for the AP600. This report presents the benchmark problems and includes all the information needed by the COL licensee to perform the analyses and evaluate the results. Acceptable analysis methods will estimate natural frequencies to within 2%, maximum pipe moments to within 5%, and support reactions and maximum displacements to within 10% of the benchmark results. A COL licensee having demonstrated this level of accuracy may use the benchmarked analysis method without further review. In instances where some deviations from the acceptance criteria occur, the results and justification for such deviations shall be documented and submitted to the staff for review and approval before initiating piping qualification analyses.

1.0 INTRODUCTION

1.1 Purpose

This report describes the NRC benchmark program for the verification of computer programs that will be used by combined license (COL) licensees to complete the design and analysis of piping systems in the Westinghouse AP600 Standardized Plant. It provides detailed descriptions of the benchmark problems including geometries, material properties, analytical methods, input loads and solutions. The report also provides the acceptance criteria which must be met to demonstrate that the COL licensee's solutions to the benchmark problems are acceptable to NRC.

1.2 Background

In reviewing the design certification application for the Westinghouse AP600 under the rules of 10 CFR Part 52, Reference 1, the NRC staff identified a number of technical areas in which the applicant did not provide design and engineering information in sufficient detail to make a final safety decision. One of these areas was piping and pipe support design where Westinghouse did not have the as-built or as-procured information to complete the final design. To resolve this issue, the staff developed an alternate approach using design acceptance criteria (DAC). The DAC are a set of prescribed limits, parameters, procedures, and attributes upon which the NRC relies in making a final safety determination to support a design certification. The DAC are objective (measurable, testable, or subject to analysis using pre-approved methods), and must be verified as a part of the inspections, tests, analyses, and acceptance criteria (ITAAC) used to demonstrate that the as-built facility conforms to the certified design. The combined license (COL) licensee will use the DAC to demonstrate conformance with the AP600 standard design during construction. This will enable the NRC staff to make a final safety determination through the review of the COL licensee's satisfactory implementation and verification of the ITAAC.

The NRC staff's evaluation of Westinghouse's proposed DAC approach for the AP600 piping design was documented in their final safety evaluation report. In that document the staff provided their evaluation of the Westinghouse certified design commitments and corresponding ITAAC for the AP600 piping design. One of these commitments was to verify the piping analysis modeling and the computer code to be used by the COL licensee to complete its piping stress analysis.

The COL licensee will verify the sufficiency of the computer code and modeling techniques in conjunction with the DAC. The NRC found this commitment acceptable provided that the computer program and the modeling techniques will be evaluated using the NRC benchmark program. The staff concluded that once the COL licensee successfully completes the DAC verifying that the piping benchmark results are within the acceptable range of values specified in the benchmark program, there is reasonable assurance that the computer code and analytical modeling techniques to be used to complete the AP600 piping design and analyses are adequate.

1.3 Benchmark Program Overview

The benchmark program requires the COL licensee to construct mathematical models and perform dynamic analyses of specified representative AP600 piping systems using his own computer program. When the analyses are completed, the COL licensee will compare his results to those of the benchmark problems given in this report to ensure that the results meet the range of acceptable values. Any deviations from these values, as well as, the justification for such deviations, shall be documented and submitted to the NRC staff for review and approval before initiating final certified piping analyses. This benchmarking will provide assurance that the computer program used to complete the AP600 piping design and analyses will produce results that are consistent with results considered acceptable to the NRC staff.

This report presents the benchmark problems and gives all information needed by the COL licensee to perform the analyses and evaluate the results. The Brookhaven National Laboratory (BNL), under contract with the NRC staff, developed these problems based on representative piping system design information provided by Westinghouse during the NRC technical review and evaluation of the AP600. The benchmark problems represent loop 2 of the main steam line and the pressurizer surge line. Although the piping benchmark problems are considered representative AP600 piping configurations they are not intended to be final designs. BNL constructed mathematical models of these two piping systems using the PSAFE2 piping analysis program.

This report provides a complete description of the input parameters for each problem including piping dimensions, material properties, weights, support stiffnesses and locations, load definitions and damping

Introduction

analysis method. The BNL solutions to each problem are presented in this report. Specific guidelines for comparing COL licensee results to these published results and acceptance criteria to be satisfied in order to demonstrate acceptability are also given.

2.0 PROJECT BACKGROUND

The PSAFE2 program is a full feature, elastic piping analysis code based on the finite element method. The program, a modified version of the general purpose computer program SAP IV, Reference 2, was developed by BNL to analyze piping systems subjected to both static and dynamic loading. Dynamic analysis capabilities include both response spectrum and time history analysis for systems subjected to either uniform or independent support motions.

The PSAFE2 program and its precursor EPIPE, Reference 3, have been extensively tested and verified against other piping programs and against physical test results. The programs have been applied to develop earlier NRC benchmark problem solutions to confirm the adequacy of programs used by nuclear power plant license applicants (References 4 and 5).

This report presents the solutions to piping benchmark problems with configurations that are representative of Westinghouse AP600 piping systems. The solution methods that were applied were not in their entirety included in earlier NRC benchmark studies. They include the uniform response spectrum method with high frequency mode responses, the independent support motion response spectrum method with high frequency mode responses, and the modal superposition time history analysis method. The following section provides a brief description of the analytical methods.

2.1 Mathematical Background

Since elastic piping analysis is a well established procedure, only a brief outline of the theoretical considerations used in obtaining the dynamic solutions will be presented. A more detailed description of the analysis methods and solution schemes is given in Reference 2.

The analysis of a piping system is carried out by use of the stiffness matrix method, in which the piping is represented by a network of basic elements, straight and curved beams, and one-dimensional elements interconnected at the nodes. The dynamic response of the network is described mathematically by the equation of motion:

$$M\ddot{u} + C\dot{u} + Ku = R(t)$$

where M is the mass matrix, C is the damping matrix,

and K is the stiffness matrix of the element assemblage. The vectors u , \dot{u} , and \ddot{u} are the nodal displacements, velocities, and accelerations, respectively. $R(t)$ can be a vector of time varying loads or of effective loads which result from ground motion. The PSAFE2 program can carry out time history or response spectrum analysis for the solution of this equation. A brief description of the methods used in these benchmark problem solutions is provided below.

2.1.1 Uniform Support Motion Response Spectrum Analysis

In the case of ground motion, if it is assumed that the piping system is uniformly subjected to the ground acceleration, \ddot{u}_g , the equations of motion can be expressed as follows:

$$M\ddot{u}_r + C\dot{u}_r + Ku_r = -M\ddot{u}_g$$

where u_r is the relative displacement of the system with respect to the ground, $u_r = u - u_g$.

The equations are then expanded in terms of the system modal matrix and generalized coordinates:

$$[M] \{\ddot{q}\} + [C] \{\dot{q}\} + [K] \{q\} = -[M] \{\ddot{u}_g\}$$

where:

$$[\Phi] = \text{normalized modal matrix } [\Phi]^T [M] [\Phi] = I$$

$$q = \text{generalized coordinates vector.}$$

Multiplication by the transpose of the modal matrix yields:

$$\{\ddot{q}\} + [\Delta] \{\dot{q}\} + [\omega^2] \{q\} = -[\Phi]^T [M] \{\ddot{u}_g\}$$

where:

$$\begin{aligned} [\omega^2] &= \text{diagonal matrix of eigen-values} \\ [\Delta] &= \text{diagonal matrix of modal damping} \\ &\text{coefficients, where the damping is} \\ &\text{assumed to satisfy the modal} \\ &\text{orthogonality condition. This results} \\ &\text{in } n \text{ uncoupled equations for the} \\ &\text{generalized coordinates.} \end{aligned}$$

The equation set can be solved for the maximum modal response for each system degree of freedom corresponding to excitation in each spatial direction as

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follows:

$$u_{m,n,i} = \frac{S_{n,i}}{\omega_n^2} \phi_{m,n} L_{n,i}$$

where:

- $u_{m,n,i}$ = maximum displacement of mth degree of freedom in the nth mode due to excitation in the ith spatial direction
- $S_{n,i}$ = value of spectral acceleration corresponding to frequency ω_n , and the ith spatial direction input response spectrum
- $L_{n,i}$ = modal participation factor for nth mode and ith spatial direction
- ω_n = nth system natural frequency
- $\phi_{m,n}$ = modal deflection of degree of freedom m in nth mode
- m = degree of freedom index
- n = modal index
- i = spatial index

For the final solution, the maximum modal responses are combined over the first n modes up to the cutoff frequency (the lower frequency nodes) at which the spectral acceleration roughly returns to the zero period acceleration (ZPA). For the benchmark problems given in this report, the modal combinations were performed in accordance with either the grouping method or the double sum method as described in Sections 1.2.1 and 1.2.3 of Regulatory Guide 1.92, Reference 6, respectively.

In some piping systems the responses of modes above the cutoff frequency (the high frequency modes) may have a significant effect on the total response, especially on support reactions. In order to ensure that these high frequency mode effects are accounted for, an additional calculational procedure based on the methodology described in Appendix A to Section 3.7.2 of the Standard Review Plan, Reference 7, was implemented. This procedure is as follows:

For each degree of freedom (DOF) included in the dynamic analysis, the fraction of DOF mass, d_i , included in the summation of all of the modes up to the cutoff frequency was calculated for each DOF as follows:

$$d_i = \sum_{n=1}^N L_n \times \phi_{n,i}$$

where:

- n is order of the mode under consideration,
- N is the number of modes included in Step 1,
- $\phi_{n,i}$ is the nth natural mode of the system, and
- L_n is the participation factor given by:

$$L_n = \frac{(\phi_n)^T \{1\}}{(\phi_n)^T [M] (\phi_n)}$$

The fraction of DOF mass not included in the summation of these modes, e_i , was then calculated as:

$$e_i = d_i - \delta_{ij}$$

where δ_{ij} is the Kronecker delta, which is one if DOF i is in the direction of the earthquake motion and zero if DOF i is a rotation or not in the direction of the earthquake input motion.

Since higher modes can be assumed to respond in phase with the ZPA and thus, with each other, these modes should be combined algebraically. This is equivalent to pseudostatic response to the inertial forces from these higher modes excited at the ZPA. These pseudostatic inertial forces for all higher modes for each DOF i are given by:

$$P_i = ZPA \times M_i \times e_i$$

where:

P_i is the force or moment to be applied to DOF i.

M_i is the mass or mass moment of inertia associated with DOF i.

In order to determine the maximum responses associated with the high frequency modes, a static analysis is performed by applying this set of pseudostatic inertial forces to all of the degrees of

freedom in the model. The total high frequency mode responses are then combined by the square-root-of-sum-of-squares method with the total combined response from the lower-frequency modes to determine the overall piping system peak responses.

2.1.2 Independent Support Motion Response Spectrum Analysis

For a piping system that is supported at multiple locations that are subjected to different seismic motions, the independent support motion (ISM) response spectrum method of analysis may provide more realistic results. The governing equations of motion for this type of analysis may be expressed as follows:

$$\begin{bmatrix} M_p & 0 \\ 0 & 0 \end{bmatrix} \begin{bmatrix} \ddot{X} \\ \ddot{Z} \end{bmatrix} + \begin{bmatrix} C_p & C_{PB} \\ C_{BP} & C_B \end{bmatrix} \begin{bmatrix} \dot{X} \\ \dot{Z} \end{bmatrix} + \begin{bmatrix} K_p & K_{PB} \\ K_{BP} & K_B \end{bmatrix} \begin{bmatrix} X \\ Z \end{bmatrix} = \begin{bmatrix} 0 \\ F_B \end{bmatrix}$$

where:

- M_p = Pipe mass matrix
- C_p = Pipe damping matrix
- K_p = Pipe stiffness matrix
- C_B = Support damping matrix
- K_B = Support stiffness matrix
- C_{PB} or C_{BP} = Pipe support coupling damping matrix
- K_{PB} or K_{BP} = Pipe support coupling stiffness matrix
- F_B = Support force vector
- X = Pipe response vector
- Z = Support response vector

The above equation assumes that no masses are being placed at the ends of the supports where they connect to the ground and that all the external forces on the piping system are being transmitted through the supports.

The piping system response can be separated into two components, one due to the inertia or dynamic effects of pipe masses (X_D) and the other, termed the pseudo-static response, due to the differential motions of the support points (X_S). Hence,

$$X = X_D + X_S$$

After substituting these response components into the above equation of motion and neglecting the support damping effects, the governing equations for the two response components can be written as follows:

For inertia or dynamic response:

$$M_p \ddot{X}_D + C_p \dot{X}_D + K_p X_D = M_p K_p^{-1} K_{PB} \ddot{Z}$$

$$K_{BP} X_D = F_{BD}$$

For pseudostatic response:

$$K_p X_S + K_{PB} Z = 0$$

$$K_{PB} X_S + K_B Z = F_{BS}$$

In each case, the upper equation governs the motion and the lower equation defines the support reaction forces. The equation for inertia response is identical to the conventional structural dynamic equation except that the modal participation factors derived from it differ from those derived for uniform support motion.

The inertia component of response is obtained by using the modal solution approach:

$$\text{Let } X_D = \phi q$$

where ϕ = modal matrix
 q = modal response vector

The modal equation for dynamic response reduces to:

$$\ddot{q} + 2\xi\omega\dot{q} + \omega^2q = \phi^T M_p K_p^{-1} K_{PB} \ddot{Z}$$

In component form it can be rewritten as:

$$\ddot{q}_i^k + 2\xi_i\omega_i\dot{q}_i^k + \omega_i^2q_i^k = L_{ij}^k \ddot{Z}_j^k$$

where:

ξ_i = modal damping coefficient

ω_i = modal frequency

i = 1, 2, ...NF

j = 1, 2, 3, (corresponding to the three spatial directions)

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$$k = 1, 2, \dots, NG$$

Here NF and NG correspond to the number of frequencies and number of support points, or support groups, in the piping system. Thus, there exists one individual set of modal equations for each support group.

The modified modal participation factors are given as:

$$L = \Phi^T M_p K_p^{-1} K_{PB}$$

To determine the modified modal participation factors it is necessary to invert the stiffness matrix K_p . One approach to obtain this from the available modal solutions is to use the properties of the stiffness matrix with the modal frequencies and their mode shapes. That is using the relations,

$$\Phi^T K_p \Phi = \omega^2$$

and taking the inverse on both sides one derives

$$K_p^{-1} = \Phi (\omega^2)^{-1} \Phi^T$$

Using this relation the equation for the modal participation factors can be expressed as:

$$L_{ij}^k = \sum_{s=1}^n \frac{\Phi_{is} (K_{PB})_{sj}^k}{\omega_s^2}$$

where n = number of equations representing the piping model. This equation can be used to evaluate the participation factors, without any loss of generality, from the modal solutions, even if the actual modal solution has been truncated to a finite number of modes.

The response spectra values $S_j^k(\omega_i)$ at frequency ω_i , for the k th group, in the j th direction of excitation, are obtained by solving the equation for a single degree of freedom system subjected to an acceleration of $Z_j(k)$, using the Duhamel integral, and is given by:

$$S_j^k(\omega_i) = \left| \frac{1}{\omega_i \sqrt{1 - \xi_i^2}} \int_0^t \ddot{Z}_j^k(\tau) e^{-\xi_i \omega_i (t-\tau)} A \right|_{\max}$$

where:

$$A = \sin \sqrt{1 - \xi_i^2} \omega_i (t - \tau) d\tau$$

This represents the peak possible modal response obtained by multiplying response spectra value by the corresponding modal participation factor L_{ij}^k providing:

$$(q_{ij}^k)_{\max} = L_{ij}^k S_j^k(\omega_i)$$

It should be noted that during the solution process the phasing between the individual support excitations is lost and only the peak responses due to each support excitation is obtained from the above equation. Thus, a set of modal solution vectors is obtained for each support excitation in each spatial direction. Other parameters, such as pipe displacements, accelerations, pipe forces or moments and the support forces, are obtained from these modal responses. Again, as with the uniform response spectrum method, the maximum modal responses are only obtained for the first m modes up to the cutoff frequency.

To obtain the final inertial response it is necessary to combine the group modal responses, make corrections to account for modes above the cutoff frequency, combine between group responses and combine overall directional inputs. Although various methods and sequences for performing these combinations are possible, the following specific and acceptable methodology was followed in the benchmark solutions. The combination of group modal responses is first performed in accordance with either the grouping method or the double sum method as described in Regulatory Guide 1.92. The resulting group responses are next combined using the SRSS method to provide the combined modal response for all flexible modes. In separate calculations, the contribution of high frequency modes for each group are computed in accordance with the method described in the section above. These group rigid mode contributions are then combined by the SRSS method to provide the combined rigid mode response. Next, the flexible mode response is combined with the rigid mode response by the SRSS method to provide the total inertial response for the given direction of excitation.

In the general case, an additional combination over the three directions of excitation would be made using the SRSS method to provide the total inertial response.

In the benchmarks this was not done since only excitation in a single direction were considered. Finally, in the general case a further combination would be made between the inertial response and the seismic anchor movement response to provide an estimate of total response.

2.1.3 Modal Superposition Time History Analysis

The time history response of a piping system subjected to a known forcing function can be obtained by the modal superposition method. This procedure requires the solution of the generalized eigenvalue problem to determine the frequencies and mode shapes of the system. It uses the same modal transformation procedures described above for the response spectrum method. The general equations of motion in matrix form are expressed as follows:

$$[M]\{\ddot{u}\} + [C]\{\dot{u}\} + [K]\{u\} = \{R(t)\}$$

Applying the transformation:

$$\{u\} = [\phi]\{q\}$$

The equations can be expressed in terms of the generalized modal coordinates:

$$[M][\phi]\{\ddot{q}\} + [c][\phi]\{\dot{q}\} + [K][\phi]\{q\} = \{R(t)\}$$

Multiplication by the transpose of the modal matrix and application of the modal orthogonality assumptions yields the following set of equations:

$$\{\ddot{q}\} + [\Delta]\{\dot{q}\} + [\omega^2]\{q\} = [\phi]^T\{R(t)\}$$

This set of decoupled differential equations is solved numerically for a sufficient number of modes needed to adequately characterize the dynamic response of the piping system. In selecting the integration time step and the number of modes, the dynamic characteristics of the system as well as the forcing function must be considered. The PSAFE2 program uses the Wilson Θ numerical integration method which is an unconditionally stable step-by-step integration scheme. Finally, the modal responses are converted back to geometric coordinates u and combined algebraically at each time step to provide the total response of the piping system as a function of time.

2.2 Input-Output Format

To facilitate proper use of the enclosed data a brief

summary of the PSAFE2 input-output data lists will be presented. For a basic description of element properties, coordinates, etc., reference can be made to the earlier benchmark reports, References 4, 5, and 8.

The first page of each problem shows a table listing the significant parameters for the problem and the analysis options activated for the analysis. The number of element types is the number of boundary-spring element and pipe element groups used to define the model. The number of frequencies is the number of frequencies solved for in the eigen value routine and used in the subsequent response spectrum analyses. The interpretation of the various option flags is obvious, although not all of the options are used in the benchmark problems.

The next pages show the nodal point list. The column labeled old node is the label assigned the nodal point in the finite element model. The column labeled new mode is the sequential label assigned to the node within the program and used in all program algorithms. The boundary condition codes define the constraints imposed at the node, a "1" signifying that the degree of freedom is completely restrained while "0" or ("-0") signifies complete freedom. As indicated, each mode potentially has six degrees of freedom, "X" signifying displacement in the X global direction and "XX" signifying rotation about the X global axis. The following nodal coordinates define the location of the node in the global coordinate system and are in inches. The last column designated "T" is the nodal temperature.

The next blocks of input information are the input element data lists. Since the system may be subdivided into groups of elements this data is entered group by group. The possible element types are spring elements, anchor movement elements, snubber elements, and pipe (either tangent or bend) elements. A single group is comprised of all pipe elements or all spring elements as intermixing element types within a group is not allowed.

For a typical pipe element group, the first page lists control information for the group, i.e., type of element, number of elements, etc. This is followed by a material properties table where on each line of this table are specified, the material identification number, the temperature for which the data applies and the corresponding modulus of elasticity, Poisson's ratio and coefficient of thermal expansion. For cases where the variation of material properties with temperature are

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considered, the element temperature is the average of its bounding nodal temperatures and a linear variation of the input material properties data with temperature is assumed. Following this is the section properties table where all data entries are clearly labeled. Next, if appropriate, is a branch point list specifying the nodes where pipe runs intersect, followed on the same page by entries entitled, "Load Case Multipliers." These only apply to static analysis runs and may be ignored herein. The last and largest list in the group data is the element definition and connectivity table. Again, the columns in this table are clearly labeled. For the bend elements, two lines are shown. The pressure indicated on the first line is the value of pressure used in computation of the bend flexibility. The entries on the second lines are the bend radius, third point declarer and the X, Y, Z coordinates of the third point. If the third point declarer is "TI" the coordinates of the bend tangent intercept are listed, if "CC," the coordinates of the bend center of curvature are listed. The columns entitled direction cosines, wall fraction and input tag may be ignored.

The group data list for boundary or spring elements is somewhat simpler. There is the element control information followed by element load case multipliers which again may be ignored. The element definition and connectivity list follows and is clearly labeled. The interpretation of the pertinent information in this table is as follows: support group number NG designates the excitation group to which the spring belongs; code KD and KR are spring type declarers where KD=1 signifies a linear spring while KR=1 signifies a rotational spring. The direction cosines listed define the line direction along or about which the spring acts in relation to the global axis. The specified displacement - rotation columns relate to imposed displacements and can be ignored. The last column lists the element spring rate in lb. per inch or inch³ per radian.

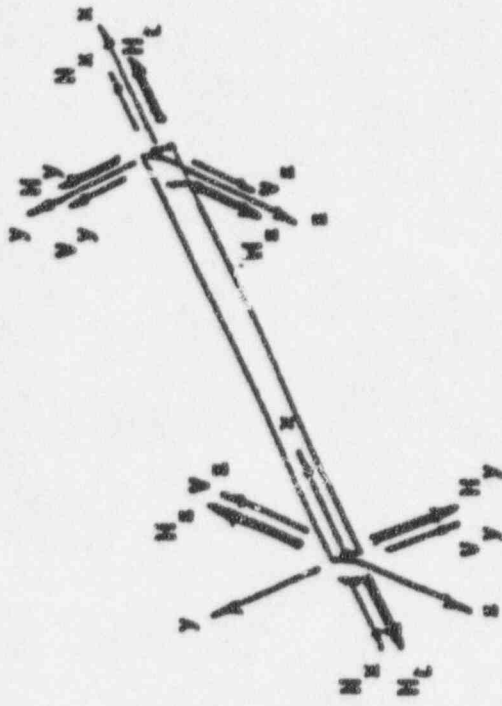
The next table of input is labeled nodal loads. For the dynamic cases the table is a listing of all the concentrated masses, and the nodes at which they are located, acting on the system. A complete absence of this table indicates that there are no concentrated loads. The total mass used in each analysis is the sum of these quantities plus any distributed mass developed in the pipe elements. Distributed mass is developed in the pipe elements only if quantities appear in the columns entitled weight/unit length - mass/unit length in the pipe element section property tables.

The remaining input data describes the input response spectra or the time history forcing function, if appropriate. For the response spectrum cases the input spectra appear immediately after the output list of frequencies and modal participation factors. If the case is independent support motion, the output participation factors and the listed spectra are for the specific support group. This data includes the direction weighting factors, a descriptive title and a table of the spectrum values given in "g's". If only one spectrum is provided it applies to all three directions as modified by the weighting factors. If two spectra are provided, the first applied only to the X direction while the second applies to the Y and Z directions. Intermediate values between data points are obtained by linear interpolation.

For a modal superposition time history case, the definition of the time history forcing functions follows after the output list of frequencies. This data is input by support groups and includes first a summary of control information specifying forcing function number, type and size, analysis time step, phasing (controlled by arrival times), duration and modal damping information (applies to all modes), and output print interval. This is followed by forcing function type, direction and arrival time declarers followed by the detailed definition of the forcing functions. The forcing function record is digitized and includes a listing of the time and corresponding function value for each point of the function definition and is preceded by scale factor, function number and heading information. The function value for intermediate times is derived by linear interpolation. Regarding arrival times, an arrival time of 0.0 connotes forcing function application at time equal to 0.0. This information is provided sequentially for each support group in the system and acts simultaneously on all supports within a group.

The output provides listings of all the pertinent results. For the response spectrum solutions these include the system natural frequencies, modal participation factors, global displacements/rotations of all nodal points and element forces/moments for all elements based on the sign convention shown in Figure 1. The displacement and force results are provided first for the lower frequency modes (amplified response), then for the higher frequency modes (rigid response), and lastly for the final results corresponding to SRSS combination of the response due to the lower frequency modes with the response due to the higher frequency modes. For the rigid response, the contribution to response for excitation in each of the coordinate directions is, in fact, provided. These are labeled load

Straight Pipe Element



Where V_y, V_z - Shear Forces
 N_x - Normal Force
 M_y, M_z - Bending Moment
 M_t - Torsion Moment

Bend Pipe Element

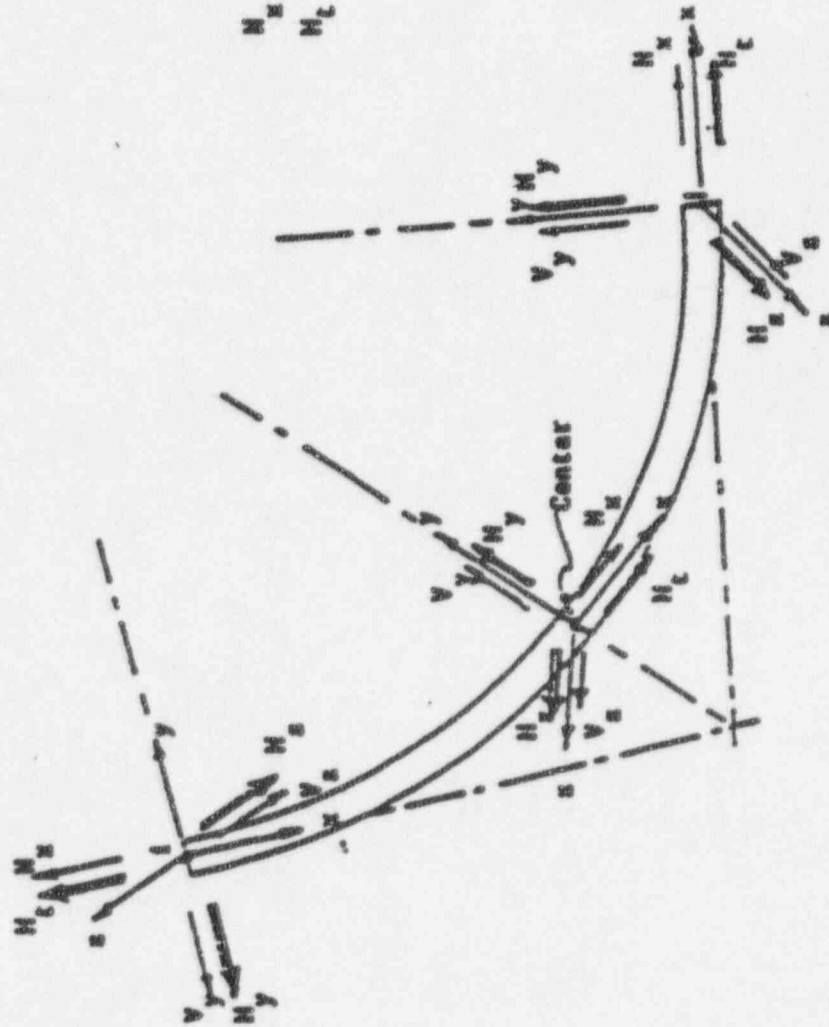


FIGURE 1 - SIGN CONVENTION FOR FORCES AND MOMENTS

Project Background

cases 1, 2 and 3 corresponding to excitation in the X, Y, and Z directions respectively. These results are developed by static analyses and are combined by SRSS before combination with the amplified response. In effect, the rigid response is treated as an additional mode and summed with the other, lower frequency modes.

The time history output is simpler. It consists of three tables of maxima listed with their corresponding time at maxima. The first table is for nodal displacements with six displacement components for each node. The displacement component declarers have the following interpretation: 1, 2, and 3 are the translations of the node in the X, Y, and Z directions respectively while 4, 5, and 6 are the rotations of the node about the X, Y, and Z axis respectively. The next table provides the spring/boundary element force (labeled stress) maxima. A component declarer equal to one in this table indicates a force while the declarer equal to two indicates a moment. The last table provides the maxima for pipe element force components (labeled stress). For each element twelve components of force are listed; the first six corresponding to the i and the remaining six to the j end. The component declarers in this table have the following interpretations: 1, 2, and 3 / 7, 8, and 9 are the i end / j end forces in the element X, Y, and Z axes respectively while 4, 5, and 6 / 10, 11, and 12 are the i end / j end moments about the element X, Y, and Z axis respectively.

3.0 DESCRIPTION OF PIPING BENCHMARK PROBLEMS

For the AP600 Standardized Plant three piping benchmark problems involving two representative piping systems were developed. The first piping system represents the pressurizer surge line while the second represents loop 2 of the main steam line. Both these systems are segments of piping extracted from the very extensive piping model used by Westinghouse to analyze the AP600 piping. The systems were selected as sample analyses to demonstrate the analysis methodology proposed for design analysis of piping in the AP600. The solutions represent analytical benchmarks for three analysis methods, the uniform support motion response spectrum method, the independent support motion response spectrum method and the modal superposition time history analysis method. Each of these methods is proposed for use in the design of piping in the AP600 and were demonstrated in the sample analyses. The COL licensee having demonstrated that the results he develops for these problems are in agreement with the benchmark results will be entitled to use these methods in design analysis.

The computational options used in the benchmarks are considered acceptable. For the response spectrum method clustering between closely spaced modes in accordance with the grouping method as described in Section 1.2.1 of Regulatory Guide 1.92 and additions to account for high frequency modes per SRP 3.7.2 Appendix A, must be made. Interspatial and, for the independent support motion response spectrum method, intergroup combinations may be made using the SRSS method. Any sequence in performing the combinations is acceptable.

For the response spectrum benchmarks the interspatial combination was performed first using the SRSS combination method. Next the combination over modes was performed using the grouping method with the contribution for high frequency modes being considered an additional mode. Lastly, the combination between groups was performed, if appropriate, again using the SRSS combination method.

No definition of acceptable combination procedures are required for the time history method. Instead, good practice would require that the time step used be sufficiently small to provide good estimates of system response. One tenth the smallest period of interest is a recognized rule for time step size. In any

case, having selected a time step, its adequacy should be demonstrated by showing that a reduction of time step size by a factor of two does not change the predicted response by more than 10%. This sensitivity to time step check was made in the time history benchmark. For the modal superposition method a check to assure that a sufficient number of modes has been used to ensure participation of all significant modes must be made. The criterion for this check is specified in SRP 3.7.2 and requires that the inclusion of additional modes do not result in more than a 10% increase in response.

The listing of the output results for each problem is relatively complete. The greatest omission is the deletion of the predicted mode shape information. The inclusion of this data would have resulted in a five fold increase in the size of this report. Further omissions are the calculations for high frequency effects. These are simple static analyses which can be performed various ways. A full description of the format of the output is provided in the preceding section.

3.1 Benchmark Problem 1

The first AP600 piping benchmark is a uniform support motion response spectrum solution for the pressurizer surge line subjected to safe shutdown seismic loads. The piping system, shown in Figure 2, extends in a spiral fashion from a nozzle on the hot leg, at steam generator 1, to the pressurizer nozzle. It consists of 18 inch (46 cm) diameter schedule 160, ASME SA 376, 316 LN stainless steel piping. It is restrained by the two nozzle connections, a rigid and snubber support in the horizontal directions and one snubber in the vertical direction. It is supported against dead weight in the vertical direction by several spring hangers. There are no valves or pipe mounted equipment on the line. The nominal temperature and pressure for the line are 653°F (345°C) and 2485 psig (17134 k Pa).

The finite element model for the system is shown in Figure 3 (numbering corresponds to new node numbers). It consists of 69 pipe elements and 70 nodes. Anchors exist at node 7090 (new node number 1), the hot leg connection, and node 3250(70), the pressurizer nozzle. Snubbers exist at node 3035(15) and node 3083(32), with that at 3035 acting in the vertical direction and that at 3083 acting in a horizontal direction. Spring restraints exist at nodes 3047, 3116 and 3210 (20, 45 and 57), with the restraints at node 3210 acting in both the vertical and a horizontal

AP600 PRESSURIZER SURGE LINE BENCHMARK ANALYSIS

UNDEFORMED SHAPE

AXIS= 3 ALPHA= 30.00 BETA= 240.00

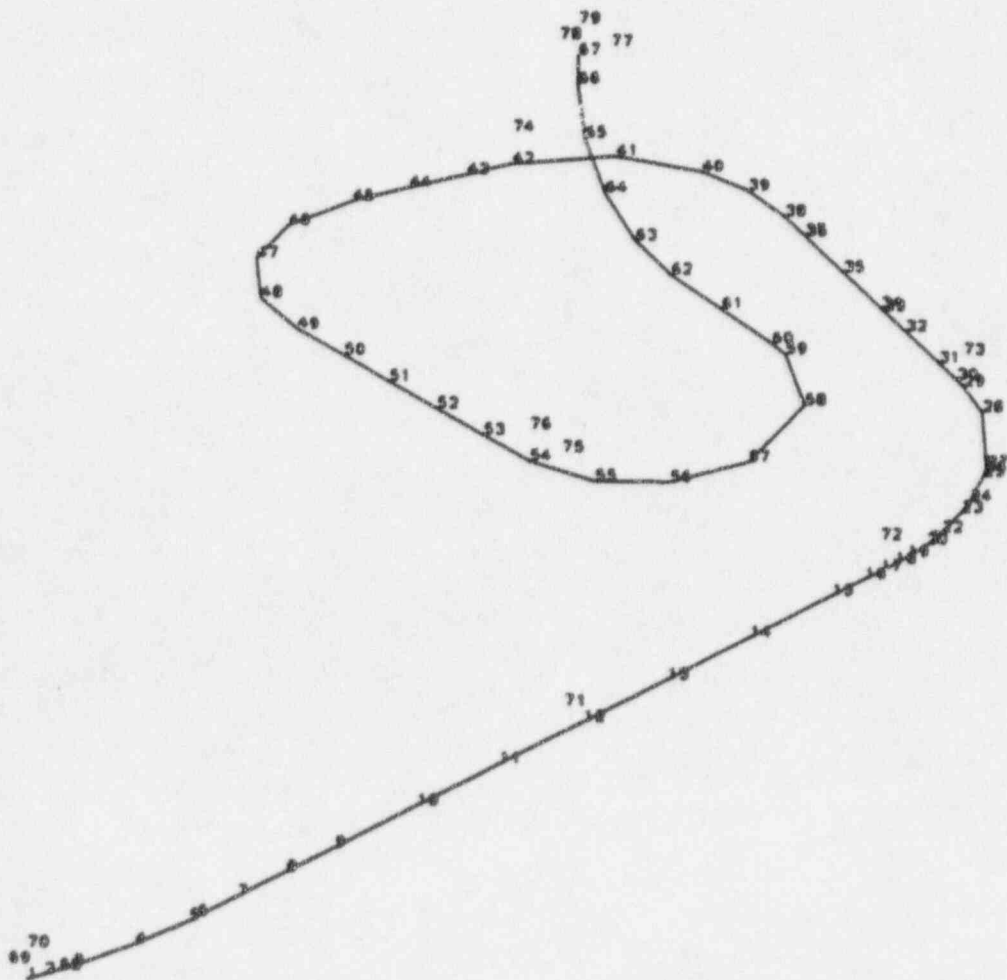


FIGURE 3 - PRESSURIZER SURGE LINE ISOMETRIC

Description of Piping Benchmark Problems

directions while those at 3047 and 3116 act only in the vertical direction. In the analyses the anchors are modeled as stiff springs ($K = 1E + 11$ lb/in. in translation and $K = 1E + 13$ in.-lb./rad in rotation) in the six degree of freedom directions. The snubbers and restraints are modeled as linear springs with stiffnesses consistent with their properties. All parameters relating to the model were taken consistent with the Westinghouse data and are specified in the included computer input listing.

In the analysis a cutoff frequency of 60 Hz was used. A listing of the first 10 natural frequencies for this problem are presented in Table 1. Computer generated isometrics of the first four modes are shown in Figure 4. The loading was the envelope SSE spectra in the three coordinate directions based on ASME Code Case N411 damping. A digitization of the spectra is included in the input listing. Clustering between closely spaced modes by the grouping method and additions to account for the contribution of high frequency modes, were made. In the calculation, SRSS interspatial combination was performed first, followed by combination with clustering between the low frequency or amplified modes, followed by SRSS combination with the contribution from high frequency modes to provide the total response. Listings of the low frequency, high frequency and total responses are presented in the output listings.

3.2 Benchmark Problem 2

The second AP600 piping benchmark is an independent support motion response spectrum solution for the pressurizer surge line subjected to safe shutdown seismic loads. The piping and finite element model are identical to those used in the preceding benchmark, and Figures 2, 3, and 4 should be referred to. This apparent second seismic evaluation of the surge line is provided to benchmark the independent support motion methodology. The seismic design analysis for the pressurizer surge line will be based on the envelope response spectrum method as per the preceding benchmark. However, since the independent support motion response spectrum method is an analysis option for the design of piping in the AP600 plant, a sample analysis of the surge line, based on the method, was developed and adopted as a benchmark.

In the analysis, the supports were segregated into three support groups. The first group includes all the interim supports on the line, the second group is the nozzle on the hot leg, and the last group is the nozzle

on the pressurizer. The cut-off frequency was again 60 Hz. For this evaluation, however, the input spectra corresponds to 5% uniform damping. In the analysis, the modal and interspatial combinations were identical to those used in the preceding benchmark. Further, the summation between group responses is made last using SRSS combination to provide total response.

Results for this problem are provided at both the group level and the combined level. The group level results include the support group modal participation factors and group response components. These data are provided for information. The actual benchmark comparisons should be made to the combined results provided in the benchmark solutions.

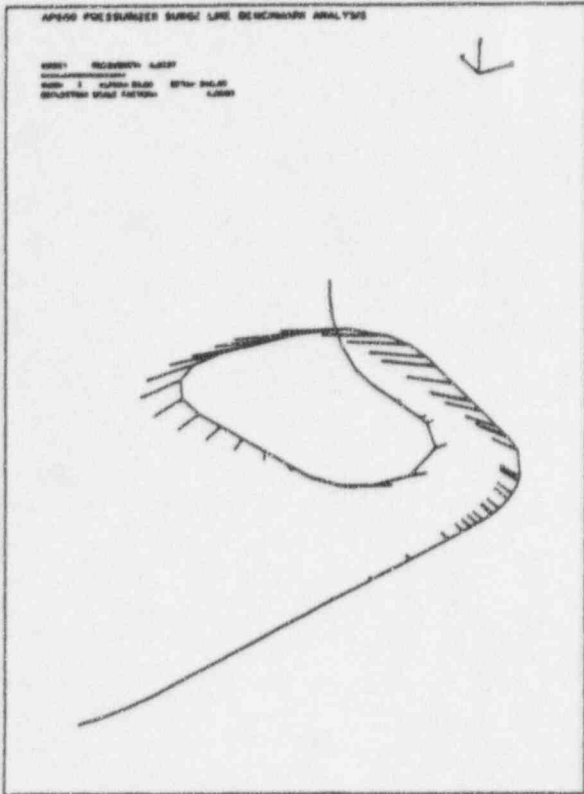
3.3 Benchmark Problem 3

The third AP600 benchmark is a time history solution for the main steam loop 2 piping subjected to the transient loading induced by a pipe line break. The line, shown in Figure 5, extends from the steam generator nozzle, through a containment penetration, to an anchor at the auxiliary building. It consists of a 32 inch (81.5 cm) diameter by 1.44 inch (3.7 cm) wall, main line of ASME SA-333 Grade 6 carbon steel and three 8 inch sch 160 relief valve branch lines of ASME SA-508 Class 3 carbon steel. The line is restrained and supported in the horizontal and vertical directions with seven restraints and two snubbers. It is anchored at the auxiliary building and the steam generator nozzle is also considered an anchor. As noted, the line passes through a containment penetration and includes one inline valve. The design temperature and pressure for the line are 520°F (271°C) and 798 psig (5498 k Pa), respectively.

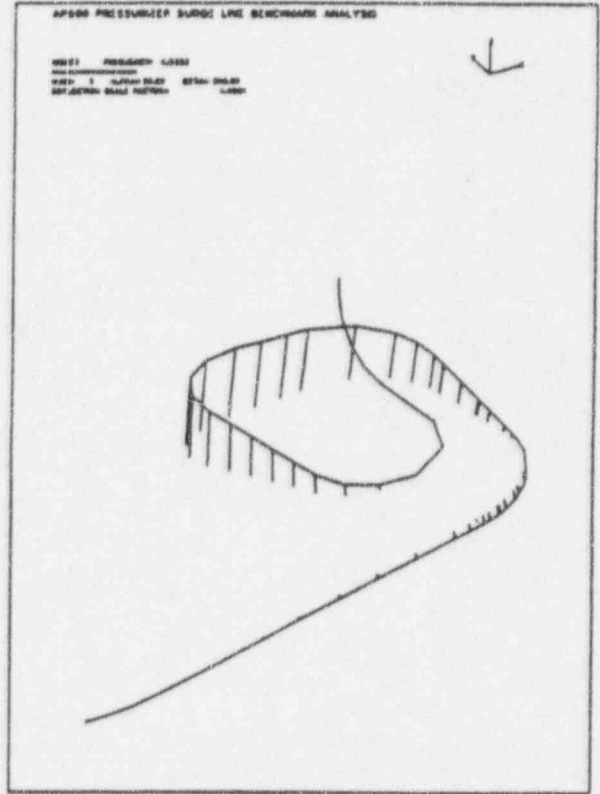
The finite element model for the system is shown in Figure 6. It consists of 95 pipe elements and 96 nodes. Anchors exist at node 101 (1), the steam generator nozzle, and node 340 (50), a true anchor at the auxiliary building. A snubber acting in the horizontal directions exists at node 6020 (11) while the second snubber, acting in the vertical direction, exists at node 6050 (18). Restraints exist at nodes 6020 (11), 6040 (14), 6070 (23), 6090 (29), 239 (36) and 261 (40) with the first four acting in the horizontal directions and the last three acting in the vertical direction. In the analyses the anchors are again modeled as stiff springs in the six degree of freedom directions. The restraints and snubbers are likewise modeled as linear springs with stiffnesses consistent with their properties. The inline valve body is modeled with triple wall thickness

TABLE 1
PRESSURIZER SURGE LINE MODAL ANALYSIS RESULTS

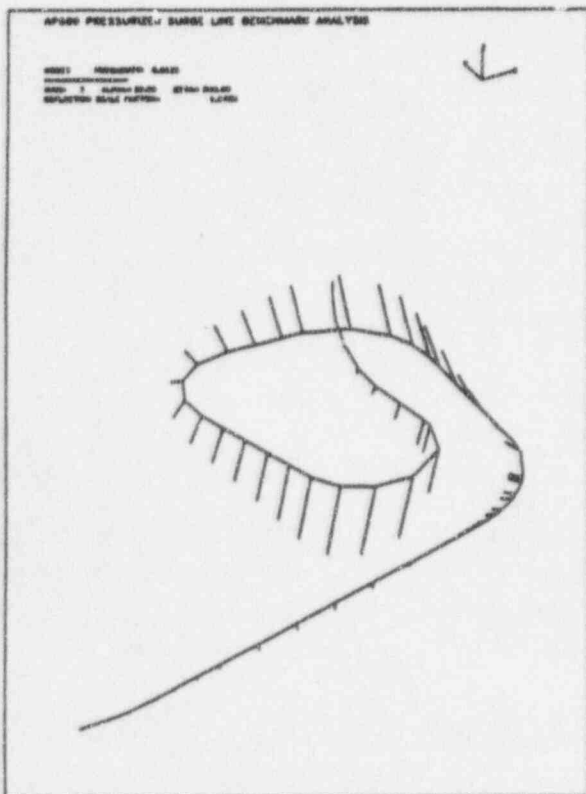
MODE NO.	FREQUENCY (CPS)	MODE DOMINANT DIRECTION
1	4.060	X
2	4.526	Z
3	8.853	Y, Z
4	10.308	Y, Z
5	15.502	X, Y
6	18.727	Z
7	23.947	X
8	34.765	X, Y
9	38.358	Y
10	42.006	Y



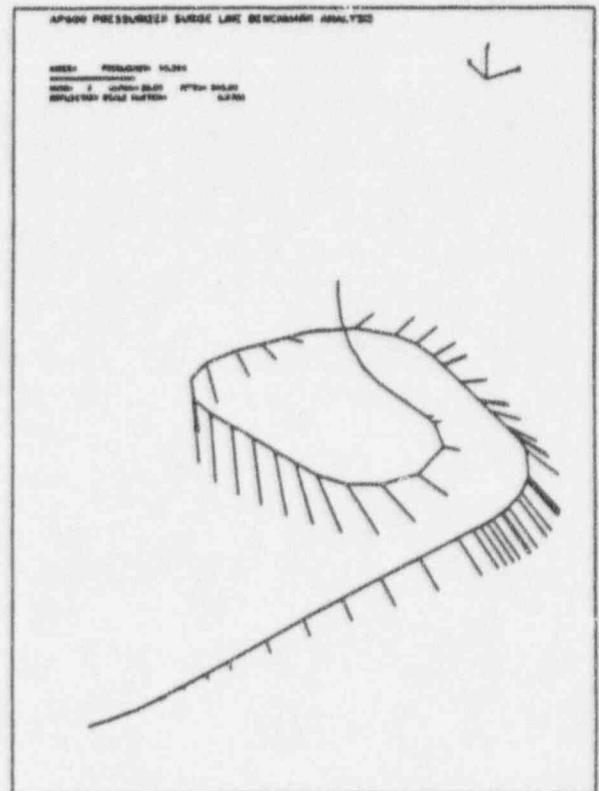
MODE 1



MODE 2



MODE 3



MODE 4

FIGURE 4 - PRESSURIZER SURGE LINE MODE SHAPES

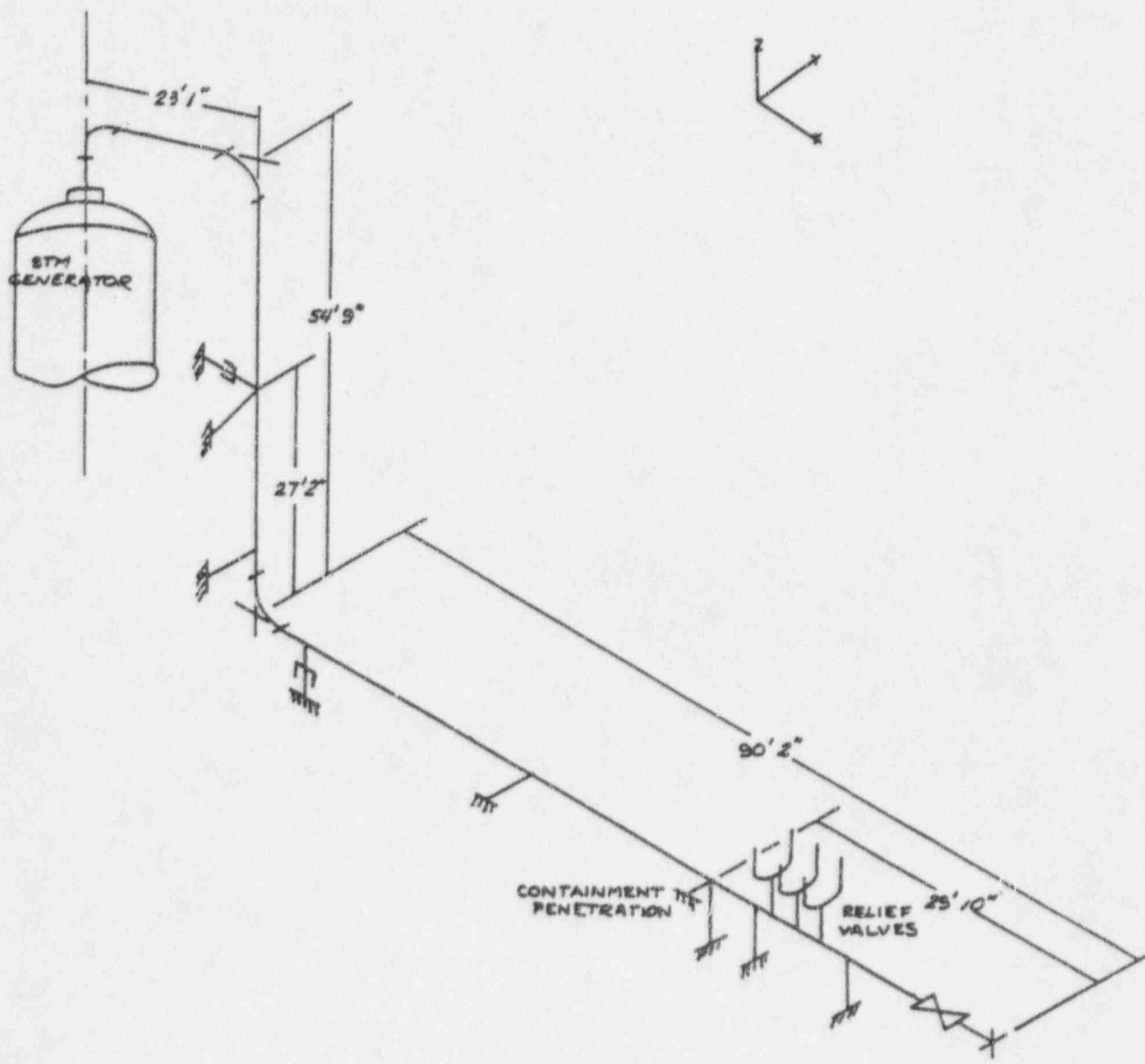


FIGURE 5 - MAIN STEAM LINE

AP600 MAIN STEAM LINE BENCHMARK ANALYSIS

UNDEFORMED SHAPE

AXIS= 3 ALPHA= 45.00 BETA= -45.00

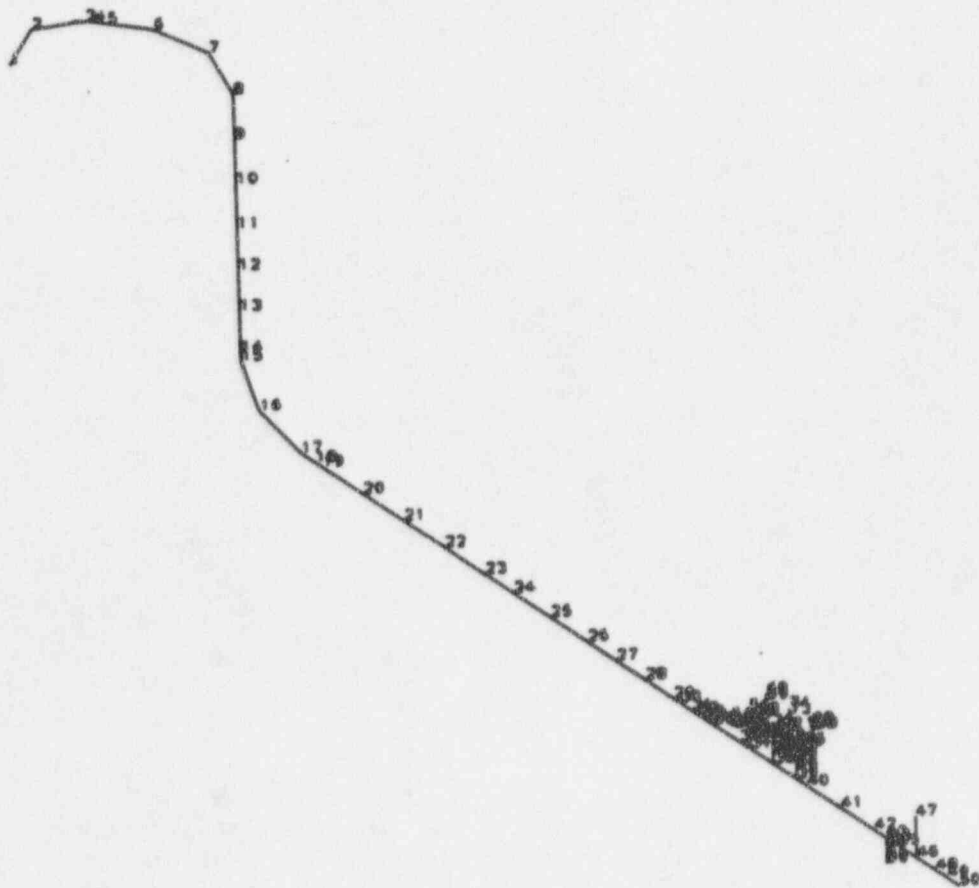


FIGURE 6 - MAIN STEAM LINE ISOMETRIC

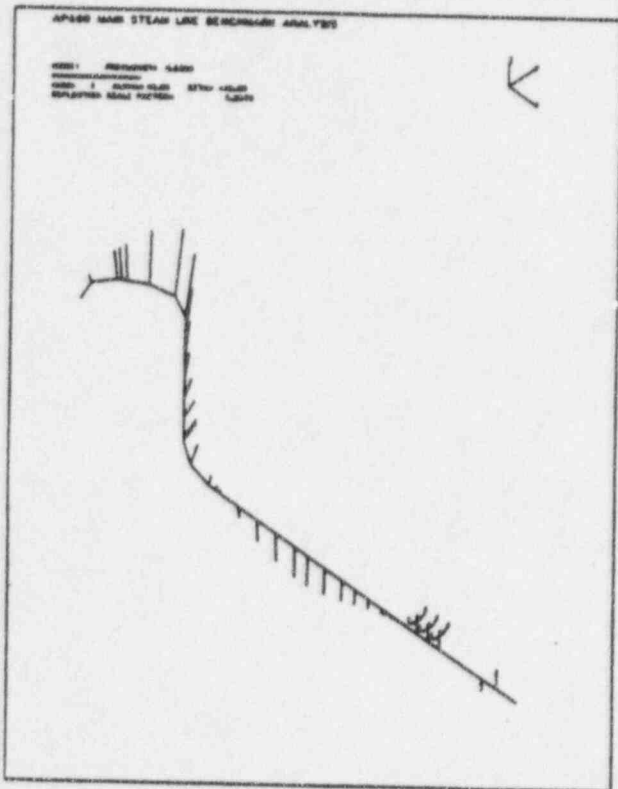
pipe while the relief valves are modeled with pipe segments of various sizes to simulate relief line properties. All parameters relating to the model were taken consistent with the Westinghouse data and are specified in the included computer input listing.

The solution was developed using the modal superposition time history method. The loading function was a set of time varying faces acting on nodes 101, 130, 6040, 6070 and 310 (1, 5, 14, 23 and 46). The forcing functions are of 3 second duration and act in each of the three coordinate directions. A full digitized record of the forcing functions is provided in the input list. In the analysis a cut off frequency of 110 Hz was used resulting in a 41 mode, modal approximation. A listing of the first ten natural frequencies is presented in Table 2. Computer generated isometrics of the first four modes are shown in Figure 7. A listing of modal participation factors corresponding to uniform support excitations, developed in a separate analysis of the system, is provided in the computer list to facilitate to model verification. Damping was taken as a uniform 3% of critical for all modes. The solution time step was 0.0001 seconds for a total duration of three seconds.

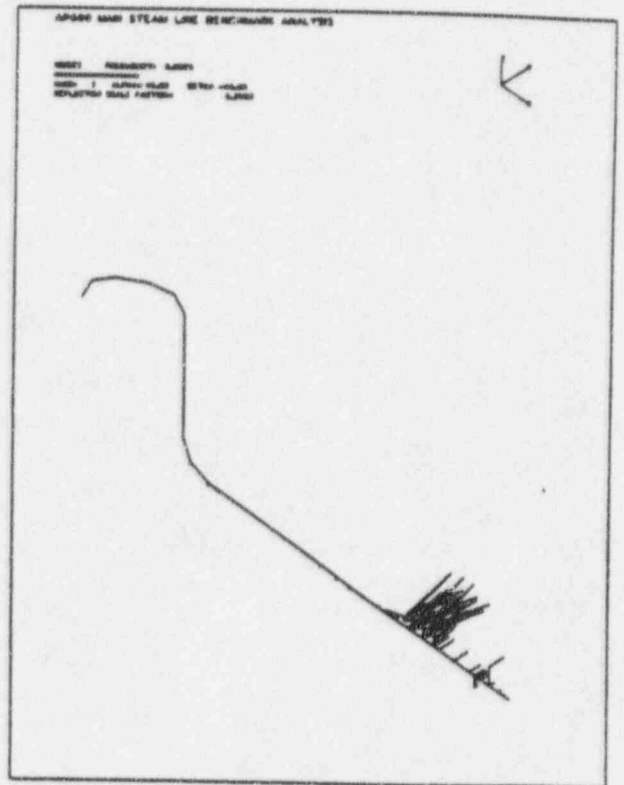
The output consists of the maxima and their time of occurrence for each response component. The maxima are based on a sampling at every tenth time step or providing results for a time step of 0.001 sec. If a finer sampling rate is used the times of maxima occurrence and, in fact, the magnitude of the maxima will change. For the benchmarking purpose the predication of comparable results for the same sampling frequency will be adequate. Although a more comprehensive tabulation of results would be desirable, the results provided are adequate for the benchmarking purpose. The tabulated outputs are well labeled and should be readily understood.

TABLE 2
MAIN STEAM LINE MODAL ANALYSIS RESULTS

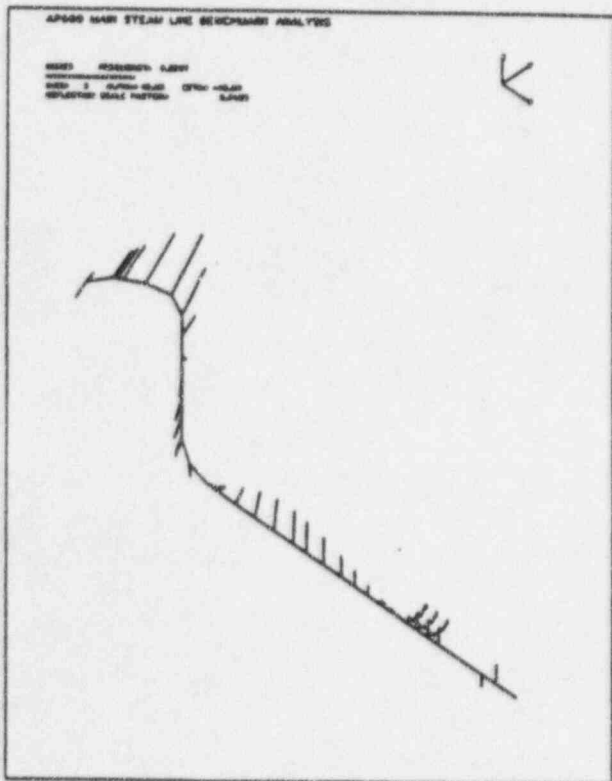
MODE NO.	FREQUENCY (CPS)	MODE DOMINANT DIRECTION
1	8.555	X, Y, Z
2	9.007	Y
3	9.269	X, Y
4	12.073	Z
5	16.122	Y
6	16.403	X
7	16.546	Y
8	17.059	Y
9	17.261	Z
10	17.461	X



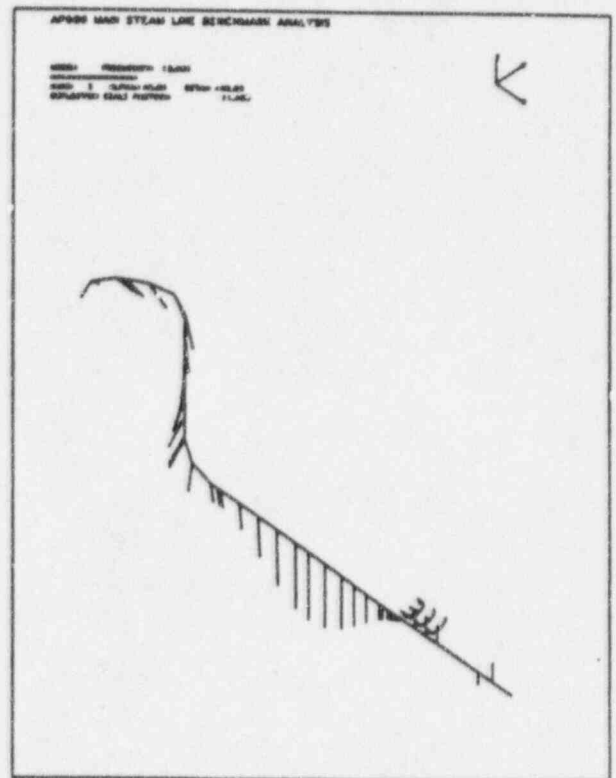
MODE 1



MODE 2



MODE 3



MODE 4

FIGURE 7 - MAIN STEAM LINE MODE SHAPES

4.0 BENCHMARK ACCEPTANCE CRITERIA

Earlier NRC benchmark reports provided comprehensive descriptions of the benchmark problem inputs and results but did not provide any definition of the acceptance criteria used to judge adequacy. Instead, the results of a benchmarking effort were submitted to the staff for evaluation on a case-by-case basis. This procedure was followed for most of the "work horse" computer codes then used by industry to qualify piping, including PISYS, ADLPIPE, WECAN, PISTAR, NUPIPE, SUPERPIPE, and PIPSYS.

For the AP600 standard design benchmarks it was considered to be more appropriate to specify the acceptance criteria to be met. This will allow the COL licensee to assess the adequacy of his methods as the benchmark solutions are developed; precluding the striving for "perfect" results and flagging early on, analysis methods that are deficient. When successful, the COL licensee will simply have to retain an auditable record of the benchmarking effort to verify the adequacy of the methods to be used to qualify piping.

For the acceptance criteria, maximum allowed differences, expressed as a percent, rather than specific values, are specified and a summary of the criteria as presented in Table 3. As can be seen, the criteria is different for each response parameter, ranging from 2% for every natural frequency, to 10% for maximum displacements. Comparisons are required to be made for all natural frequencies and support reaction forces, but for only the maximum displacements and pipe moments in the designated pipe segments given in Table 4. The percentage differences are given by $100 (PE - BE) / BE$ where, PE is the predicted value, and BE is the benchmark value, for a specific response.

Comparisons are required to be made for every natural frequency and every component of support reaction. Regarding natural frequencies, these are fundamental characteristics of a system, and if they are not predicted accurately there is little possibility that correct estimates of system response can be developed. Consequently, the requirement to compare all frequencies to a tight tolerance was specified. Support reactions on the other hand are not fundamental characteristics of a system, but unlike pipe moments and forces, every component of reaction is used explicitly in the design process. That is, supports and anchors are typically designed individually for the specific loads they will carry with only a small level of conservatism. Consequently, it is important to provide

reasonably accurate estimates of all reactions and the benchmarking requirement was set accordingly.

For pipe displacements and moments, only comparisons of maximum values are required. This is again consistent with the design/qualification process where only the maximum values impact on design. These comparisons are required to be made in each unique section of pipe for each problem. This was specified to assure that reasonably accurate estimates of all system responses was being made rather than good estimates for only a local region. The accuracy tolerances specified denote the relative importance assigned these parameters.

Again, reflecting design practice, some relaxation of criteria is allowed for pipe moments. Specifically, for these, if the estimates of the maximum components of moment do not meet criteria, comparisons can be made to the resultant moment at each location of maxima, and if these meet criteria, the benchmarking is acceptable. This reflects design practice in that it is only the resultant moments that enter into the qualification evaluations.

Finally, it is recognized that the benchmarking effort may not be clean cut in every application. Candidate analysis methodologies may not meet criteria for every parameter for all comparisons. In these instances, the COL licensee must interact with the staff providing additional justifications for acceptance. These applications will be assessed on a case-by-case basis.

TABLE 3

ACCEPTANCE CRITERIA

PARAMETER	CRITERIA	COMMENTS
Natural Frequencies	2%	All natural frequencies up to cutoff frequency.
Maximum Displacements	10%	Comparison to be made for maximum nodal translation* in each global coordinate direction for each segment** of piping.
Maximum Pipe Moments	5%	Comparison to be made for maximum element moment* about each local coordinate axis for each pipe segment**. Failure to meet criteria is acceptable if SRSS of three components at each point of maxima meet the criteria.
Support Reaction	10%	Comparison to be made for each component of force and moment for each support and anchor.

* Maxima for each direction not necessarily at same point.

** Pipe segments defined in Table 4.

TABLE 4
PIPING SEGMENTS

A. PRESSURIZER SURGE LINE	
SEGMENT	NODE NUMBERS
1	7090 - 3035
2	3035 - 3083
3	3083 - 3210
4	3210 - 3250
B. MAIN STEAM LINE PIPING	
SEGMENT	NODE NUMBERS
1	101 - 6020
2	6020 - 6050
3	6050 - 6070
4	6070 - 6090
5	6090 - 239
6	239 - 261
7	261 - 340

5.0 CONCLUSION

Three benchmark problems have been developed for the purpose of assessing the adequacy of the analysis techniques that will be used by COL licensees to qualify piping for the AP600 Standardized Plant. If a COL licensee can demonstrate that a candidate analysis methodology provides solutions to the benchmark problems that meet all acceptance criteria, the COL licensee may use that methodology for piping design without further approval. In that instance the COL licensee must submit documentation to the staff of the benchmarking effort in sufficient detail to support the conclusion.

In the event that the benchmarking is essentially, but not wholly successful, the COL licensee may petition for staff approval on a case-by-case basis. In these instances, the documentation of the benchmarking must be augmented with additional justifications of adequacy and the use of the methodology must await staff approval.

6.0 REFERENCES

1. 10CFR, Office of Federal Register National Archives and Research Administration, "Code of Federal Regulations," Title 10, Part 52, (54 FR 15386), May 1989.
2. Bathe, J.K., Wilson, E.L., Peterson, F.E., "SAP IV-A Structural Analysis Program for Static and Dynamic Responses of Linear Systems," Report No. EERC 73-11, University of California, Berkeley, CA, 1973.
3. Subudhi, M., Bezler, P., "EPIPE, Piping Analysis Program User's Manual -Version 1981," BNL NUREG/30784, December 1981.
4. Bezler, P., Hartzman, M., Reich, M., "Piping Benchmark Problems," NUREG/CR-1677, August 1980.
5. Bezler, P., Subudhi, M., Hartzman, M., "Piping Benchmark Problems," NUREG/CR-1677, Vol. II, August 1985.
6. Regulatory Guide 1.92, "Combining Modal Responses and Spatial Components in Seismic Response Analysis," Revision 1, February 1976.
7. U.S. Nuclear Regulatory Commission, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants," Section 3.7.2, 1989.
8. Bezler, P., Gardner, D., Hartzman, M., "A Dynamic Benchmark Solution for a Hypothetical Reactor System," BNL-NUREG-23645, December 1977.

APPENDIX A

UNITS OF MEASURE

The attached computer input and output data is presented in the following units of measure:

Length	-	inches (in)
Angular rotation	-	radians (rad)
Force	-	pounds (lb)
Moment	-	in-lbs.
Time	-	seconds (sec)
Pressure	-	lbs./in ² (psi)
Acceleration	-	g's (in/sec ² /gravitational constant)
Frequency	-	Hertz (Hz) or cycles per second, cps
Temperature	-	degrees Fahrenheit (°F)

BENCHMARK PROBLEM 1
UNIFORM SUPPORT MOTION
RESPONSE SPECTRUM ANALYSIS

AP600 PRESSURIZER SURGE LINE BENCHMARK ANALYSIS - ENVELOPE SPECTRUM

CONTROL INFORMATION

NUMBER OF NODAL POINTS	=	70
NUMBER OF ELEMENT TYPES	=	3
NUMBER OF STATIC LOAD CASES	=	0
NUMBER OF DYNAMIC LOAD CASES	=	1
NUMBER OF ANCHOR MVMT CASES	=	0
NUMBER OF FREQUENCIES	=	20
SOLUTION MODE (MODEX)	=	0
EQ.0, EXECUTION		
EQ.1, DATA CHECK		
STRESS CALCULATION FLAG	=	0
EQ.0 NO		
EQ.1 YES		
ASME CODE EVALUATION FLAG	=	0
EQ.1 CLASS 1 PIPING		
EQ.2 CLASS2 OR CLASS 3 PIPING		
ACCELERATION DUE TO GRAVITY	=	386.4
BANDWIDTH MINIMIZATION FLAG	=	0
EQ.0 NO		
EQ.1 YES		
ARBITRARY NODE NUMBERING FLAG	=	1
EQ.0 NO		
EQ.1 YES		
NUMBER OF SUPPORT GROUPS	=	0
FLAG FOR NODAL COORD. INPUT UNITS	=	0
EQ.0 CONSISTENT UNIT		
EQ.1 FEET TO INCHES		

A-3

LIST OF ANALYSIS TO BE PERFORMED

LOAD CASE	DISK FILE	ANALYSIS TYPE
1	0	UNIFORM RESPONSE SPECTRUM ANAL.

NODAL POINT INPUT DATA

NEW NODE	OLD NODE	BOUNDARY		CONDITION		CODES		NODAL POINT COORDINATES			
		X	Y	Z	XX	YY	ZZ	X	Y	Z	T
1	7090	0	0	0	0	0	0	11910.000	12283.416	1251.372	653.000
2	3001	0	0	0	0	0	0	11923.164	12272.496	1259.028	653.000
3	3005	0	0	0	0	0	0	11926.320	12269.880	1260.864	653.000
4	3010	0	0	0	0	0	0	11929.476	12267.264	1262.700	653.000
5	3011	0	0	0	0	0	0	11933.088	12264.288	1264.764	653.000
6	3012	0	0	0	0	0	0	11939.124	12259.296	1268.232	653.000
7	3019	0	0	0	0	0	0	11953.932	12251.028	1275.132	653.000
8	3021	0	0	0	0	0	0	11968.632	12248.256	1279.728	653.000
9	3023	0	0	0	0	0	0	11971.320	12248.195	1280.388	653.000
10	3024	0	0	0	0	0	0	11983.812	12248.195	1283.268	653.000
11	3026	0	0	0	0	0	0	11999.028	12248.195	1286.760	653.000
12	3028	0	0	0	0	0	0	12014.244	12248.195	1290.252	653.000
13	3030	0	0	0	0	0	0	12040.236	12248.195	1296.240	653.000
14	3032	0	0	0	0	0	0	12066.204	12248.195	1302.240	653.000
15	3035	0	0	0	0	0	0	12092.172	12248.195	1308.228	653.000
16	3037	0	0	0	0	0	0	12118.152	12248.195	1314.216	653.000
17	3038	0	0	0	0	0	0	12144.120	12248.195	1320.216	653.000
18	3040	0	0	0	0	0	0	12170.088	12248.195	1326.204	653.000
19	3044	0	0	0	0	0	0	12180.360	12248.195	1328.580	653.000
20	3047	0	0	0	0	0	0	12185.376	12248.195	1329.708	653.000
21	3050	0	0	0	0	0	0	12189.996	12248.195	1330.776	653.000
22	3053	0	0	0	0	0	0	12194.028	12248.352	1331.712	653.000
23	3056	0	0	0	0	0	0	12200.557	12249.288	1333.248	653.000
24	3059	0	0	0	0	0	0	12201.744	12249.553	1333.524	653.000
25	3062	0	0	0	0	0	0	12206.364	12250.884	1334.664	653.000
26	3065	0	0	0	0	0	0	12214.801	12254.628	1336.728	653.000
27	3068	0	0	0	0	0	0	12218.928	12257.195	1337.796	653.000
28	3071	0	0	0	0	0	0	12226.979	12263.939	1339.944	653.000
29	3074	0	0	0	0	0	0	12228.288	12265.332	1340.292	653.000
30	3077	0	0	0	0	0	0	12229.668	12266.893	1340.676	653.000
31	3080	0	0	0	0	0	0	12240.660	12288.636	1344.168	653.000
32	3083	0	0	0	0	0	0	12242.292	12301.824	1345.116	653.000
33	3086	0	0	0	0	0	0	12242.292	12305.520	1345.296	653.000
34	3089	0	0	0	0	0	0	12242.292	12315.324	1345.668	653.000
35	3092	0	0	0	0	0	0	12242.292	12333.756	1346.484	653.000
36	3095	0	0	0	0	0	0	12242.292	12345.695	1346.988	653.000
37	3098	0	0	0	0	0	0	12242.292	12347.508	1347.072	653.000
38	3100	0	0	0	0	0	0	12242.292	12368.076	1347.972	653.000
39	3101	0	0	0	0	0	0	12242.292	12388.632	1348.884	653.000
40	3104	0	0	0	0	0	0	12242.292	12389.388	1348.944	653.000
41	3107	0	0	0	0	0	0	12242.292	12400.309	1349.448	653.000
42	3110	0	0	0	0	0	0	12239.855	12416.316	1350.264	653.000
43	3113	0	0	0	0	0	0	12233.340	12430.033	1351.152	653.000
44	3115	0	0	0	0	0	0	12215.976	12446.592	1352.640	653.000
45	3116	0	0	0	0	0	0	12188.364	12454.176	1354.188	653.000
46	3119	0	0	0	0	0	0	12174.120	12454.176	1354.812	653.000
47	3120	0	0	0	0	0	0	12156.061	12454.176	1355.592	653.000
48	3122	0	0	0	0	0	0	12137.988	12454.176	1356.372	653.000
49	3123	0	0	0	0	0	0	12114.792	12448.920	1357.656	653.000
50	3125	0	0	0	0	0	0	12097.092	12435.324	1359.120	653.000
51	3128	0	0	0	0	0	0	12085.932	12413.688	1360.752	653.000
52	3198	0	0	0	0	0	0	12084.947	12392.041	1361.904	653.000
53	3199	0	0	0	0	0	0	12088.080	12372.215	1362.768	653.000
54	3200	0	0	0	0	0	0	12091.212	12352.380	1363.644	653.000
55	3205	0	0	0	0	0	0	12094.476	12331.920	1364.556	653.000
56	3208	0	0	0	0	0	0	12097.632	12312.037	1365.432	653.000
57	3210	0	0	0	0	0	0	12100.788	12292.140	1366.308	653.000
58	3212	0	0	0	0	0	0	12109.512	12272.472	1367.444	653.000
59	3215	0	0	0	0	0	0	12125.772	12260.160	1368.768	653.000
60	3220	0	0	0	0	0	0	12148.860	12257.352	1369.956	653.000
61	3222	0	0	0	0	0	0	12176.184	12274.104	1371.768	653.000
62	3225	0	0	0	0	0	0	12184.176	12298.668	1373.268	653.000

SPRING ELEMENTS

ELEMENT TYPE = 1
 NUMBER OF ELEMENTS = 16

ELEMENT LOAD CASE MULTIPLIERS

CASE (A) 1.0000 CASE (B) 1.0000 CASE (C) 1.0000 CASE (D) 1.0000

ELEMENT NUMBER	NODE (N)	SUPPORT GROUP	CODE KD	CODE KR	DIRECTION COSINES WRT GLOBAL AXES	SPECIFIED DISPLACEMENT	SPECIFIED ROTATION	SPRING RATE
					X- Y- Z-			
1	7090	1	1	0	1.000 .000 .000	.000	.000	1.0000E+11
2	7090	1	1	0	.000 1.000 .000	.000	.000	1.0000E+11
3	7090	1	1	0	.000 .000 1.000	.000	.000	1.0000E+11
4	7090	1	0	1	1.000 .000 .000	1.000	.000	1.0000E+13
5	7090	1	0	1	.000 1.000 .000	.000	.000	1.0000E+13
6	7090	1	0	1	.000 .000 1.000	.000	.000	1.0000E+13
7	3047	1	1	0	.000 .000 .000	1.000	.000	1.0000E+13
8	3116	1	1	0	.000 .000 .000	1.000	.000	6.0000E+02
9	3210	1	1	0	.000 .000 .000	1.000	.000	6.0000E+02
10	3210	1	1	0	1.000 .000 .000	.000	.000	5.0000E+06
11	3250	1	1	0	.000 1.000 .000	.000	.000	6.0000E+02
12	3250	1	1	0	.000 .000 1.000	.000	.000	1.0000E+11
13	3250	1	1	0	1.000 .000 .000	.000	.000	1.0000E+11
14	3250	1	0	1	.000 1.000 .000	.000	.000	1.0000E+11
15	3250	1	0	1	.000 .000 1.000	.000	.000	1.0000E+11
16	3250	1	0	1	.000 .000 1.000	.000	.000	1.0000E+13

SNUBBER ELEMENTS

ELEMENT TYPE = 4
 NUMBER OF ELEMENTS = 2

ELEMENT LOAD CASE MULTIPLIERS

CASE (A) CASE (B) CASE (C) CASE (D)
 1.0000 1.0000 1.0000 1.0000

ELEMENT NUMBER	NODE (N)	SUPPORT GROUP	CODE KD	CODE KR	DIRECTION COSINES WRT GLOBAL AXES			SPECIFIED DISPLACEMENT	SPECIFIED ROTATION	SPRING RATE
					X-	Y-	Z-			
1	3035	1	1	0	.000	1.000	.000	.000	5.5150E+05	
2	3083	1	1	0	.000	.000	1.000	.000	5.5150E+05	

PIPE ELEMENT INPUT DATA

CONTROL INFORMATION

NUMBER OF PIPE ELEMENTS	=	69
NUMBER OF MATERIAL SETS	=	2
MAXIMUM NUMBER OF MATERIAL TEMPERATURE INPUT POINTS	=	3
NUMBER OF SECTION PROPERTY SETS	=	4
NUMBER OF BRANCH POINT NODES	=	0
MAXIMUM NUMBER OF TANGENTS COMMON TO A BRANCH POINT	=	3
FLAG FOR NEGLECTING AXIAL DEFORMATIONS IN BEND ELEMENTS (EQ.1, NEGLECT)	=	0

MATERIAL PROPERTY TABLES

MATERIAL NUMBER = (1)
 NUMBER OF
 TEMPERATURE POINTS = (3)
 IDENTIFICATION = (SA376 316LN)

POINT NUMBER	TEMPERATURE	YOUNG'S MODULUS	POISSON'S RATIO	THERMAL EXPANSION
1	70.00	2.813E+07	.300	8.540E-06
2	650.00	2.505E+07	.300	9.690E-06
3	700.00	2.480E+07	.300	9.760E-06

MATERIAL NUMBER = (2)
 NUMBER OF
 TEMPERATURE POINTS = (2)
 IDENTIFICATION = (FICTICIOUS MAT)

POINT NUMBER	TEMPERATURE	YOUNG'S MODULUS	POISSON'S RATIO	THERMAL EXPANSION
1	70.00	2.530E+07	.300	0.000E+00
2	700.00	2.530E+07	.300	0.000E+00

SECTION PROPERTY TABLE

SECTION NUMBER	OUTSIDE DIAMETER	WALL THICKNESS	SHAPE FACTOR FOR SHEAR	WEIGHT/UNIT LENGTH	MASS/UNIT LENGTH	DESCRIPTION
1	18.000	1.7810	.0000	3.4033E+01	8.8077E-02	18 IN SCH 160
2	21.100	3.3400	.0000	5.8924E+01	1.5224E-01	
3	24.300	4.9000	.0000	9.0696E+01	2.3472E-01	
4	37.500	3.2500	.0000	0.0000E+00	0.0000E+00	

ELEMENT LOAD CASE MULTIPLIERS

	CASE A	CASE B	CASE C	CASE D
X-DIRECTION GRAVITY	.000	.000	.000	.000
Y-DIRECTION GRAVITY	.000	.000	.000	.000
Z-DIRECTION GRAVITY	-1.000	.000	.000	.000
THERMAL DISTORTION	.000	.000	.000	.000
PRESSURE DISTORTION	.000	.000	.000	.000

PIPE ELEMENT INPUT DATA

ELEMENT NUMBER	ELEMENT TYPE	NODE -I	NODE -J	MATL. NUMBER	SECTION NUMBER	REFERENCE TEMPERATURE (BEND RADIUS)	DESIGN PRESSURE (THIRD POINT)	PEAK PRESSURE (X3-ORDINATE)	TEST PRESSURE (Y3-ORDINATE)	END CODES END-I (Z3-ORDINATE)	END-J	NODE INCREMENT (BEND DEGREE)	INPUT TAG
1	TANGENT	7090	3001	2	4	70.00	2485.00	.00	.00	0	0	1	II
2	TANGENT	3001	3005	1	3	70.00	2485.00	.00	.00	0	0	1	II
3	TANGENT	3005	3010	1	2	70.00	2485.00	.00	.00	0	0	1	II
4	TANGENT	3010	3011	1	1	70.00	2485.00	.00	.00	0	0	1	II
5	TANGENT	3011	3012	1	1	70.00	2485.00	.00	.00	0	0	1	II
6	BEND	3012	3019	1	1	70.00 (90.000)	2485.00 ()	.00 (11945.652)	.00 (12253.896)	0 (1272.012)	0	1 (11.7703)	II I
7	BEND	3019	3021	1	1	70.00 (90.000)	2485.00 ()	.00 (11961.012)	.00 (12248.628)	0 (1277.820)	0	1 (10.0888)	II I
8	BEND	3021	3023	1	1	70.00 (90.000)	2485.00 ()	.00 (11969.976)	.00 (12248.195)	0 (1280.076)	0	1 (1.7692)	II I
9	TANGENT	3023	3024	1	1	70.00	2485.00	.00	.00	0	0	1	II
10	TANGENT	3024	3026	1	1	70.00	2485.00	.00	.00	0	0	1	II
11	TANGENT	3026	3028	1	1	70.00	2485.00	.00	.00	0	0	1	II
12	TANGENT	3028	3030	1	1	70.00	2485.00	.00	.00	0	0	1	II
13	TANGENT	3030	3032	1	1	70.00	2485.00	.00	.00	0	0	1	II
14	TANGENT	3032	3035	1	1	70.00	2485.00	.00	.00	0	0	1	II
15	TANGENT	3035	3037	1	1	70.00	2485.00	.00	.00	0	0	1	II
16	TANGENT	3037	3038	1	1	70.00	2485.00	.00	.00	0	0	1	II
17	TANGENT	3038	3040	1	1	70.00	2485.00	.00	.00	0	0	1	II
18	TANGENT	3040	3044	1	1	70.00	2485.00	.00	.00	0	0	1	II
19	TANGENT	3044	3047	1	1	70.00	2485.00	.00	.00	0	0	1	II
20	TANGENT	3047	3050	1	1	70.00	2485.00	.00	.00	0	0	1	II
21	BEND	3050	3053	1	1	70.00 (90.000)	2485.00 ()	.00 (12192.012)	.00 (12248.195)	0 (1331.244)	0	1 (2.6346)	II I
22	BEND	3053	3056	1	1	70.00 (90.000)	2485.00 ()	.00 (12197.328)	.00 (12248.616)	0 (1332.480)	0	1 (4.3250)	II I
23	BEND	3056	3059	1	1	70.00 (90.000)	2485.00 ()	.00 (12201.145)	.00 (12249.408)	0 (1333.392)	0	1 (.7858)	II I
24	BEND	3059	3062	1	1	70.00 (90.000)	2485.00 ()	.00 (12204.120)	.00 (12250.128)	0 (1334.100)	0	1 (3.1970)	II I
25	BEND	3062	3065	1	1	70.00 (90.000)	2485.00 ()	.00 (12210.744)	.00 (12252.384)	0 (1335.732)	0	1 (6.0440)	II I
26	BEND	3065	3068	1	1	70.00 (90.000)	2485.00 ()	.00 (12216.936)	.00 (12255.816)	0 (1337.292)	0	1 (3.1919)	II I
27	BEND	3068	3071	1	1	70.00 (90.000)	2485.00 ()	.00 (12223.296)	.00 (12260.160)	0 (1338.924)	0	1 (6.8653)	II I
28	BEND	3071	3074	1	1	70.00 (90.000)	2485.00 ()	.00 (12227.676)	.00 (12264.660)	0 (1340.124)	0	1 (1.2972)	II I

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PIPE ELEMENT INPUT DATA

ELEMENT NUMBER	ELEMENT TYPE	NODE -I	NODE -J	MATL. NUMBER	SECTION NUMBER	REFERENCE TEMPERATURE (BEND RADIUS)	DESIGN PRESSURE (THIRD POINT)	PEAK PRESSURE (X3-ORDINATE)	TEST PRESSURE (Y3-ORDINATE)	END CODES (Z3-ORDINATE)	END-1	END-J	NODE INCREMENT (BEND DEGREE)	INPUT TAG
29	BEND	3074	3077	1	1	70.00 (90.000)	2485.00 ()	.00 (12228.972)	.00 (12266.076)	0 (1340.484)	0	0	(1.3097)	I
30	BEND	3077	3080	1	1	70.00 (90.000)	2485.00 ()	.00 (12237.660)	.00 (12276.396)	0 (1342.920)	0	0	(15.9617)	I
31	BEND	3080	3083	1	1	70.00 (90.000)	2485.00 ()	.00 (12242.292)	.00 (12295.140)	0 (1344.792)	0	0	(8.5588)	I
32	TANGENT	3083	3086	1	1	70.00	2485.00	.00	.00	0	0	1	II	
33	TANGENT	3086	3089	1	1	70.00	2485.00	.00	.00	0	0	1	II	
34	TANGENT	3089	3092	1	1	70.00	2485.00	.00	.00	0	0	1	II	
35	TANGENT	3092	3095	1	1	70.00	2485.00	.00	.00	0	0	1	II	
36	TANGENT	3095	3098	1	1	70.00	2485.00	.00	.00	0	0	1	II	
37	TANGENT	3098	3100	1	1	70.00	2485.00	.00	.00	0	0	1	II	
38	TANGENT	3100	3101	1	1	70.00	2485.00	.00	.00	0	0	1	II	
39	TANGENT	3101	3104	1	1	70.00	2485.00	.00	.00	0	0	1	II	
40	TANGENT	3104	3107	1	1	70.00	2485.00	.00	.00	0	0	1	II	
41	BEND	3107	3110	1	1	70.00 (90.000)	2485.00 ()	.00 (12242.292)	.00 (12408.504)	0 (1349.820)	0	0	(10.4162)	I
42	BEND	3110	3113	1	1	70.00 (90.000)	2485.00 ()	.00 (12237.576)	.00 (12423.636)	0 (1350.684)	0	0	(9.7524)	I
43	BEND	3113	3115	1	1	70.00 (90.000)	2485.00 ()	.00 (12226.536)	.00 (12440.305)	0 (1351.908)	0	0	(15.6197)	I
44	BEND	3115	3116	1	1	70.00 (90.000)	2485.00 ()	.00 (12203.231)	.00 (12454.176)	0 (1353.528)	0	0	(18.7479)	I
45	TANGENT	3116	3119	1	1	70.00	2485.00	.00	.00	0	0	1	II	
46	TANGENT	3119	3120	1	1	70.00	2485.00	.00	.00	0	0	1	II	
47	TANGENT	3120	3122	1	1	70.00	2485.00	.00	.00	0	0	1	II	
48	BEND	3122	3123	1	1	70.00 (90.000)	2485.00 ()	.00 (12125.796)	.00 (12454.176)	0 (1356.900)	0	0	(15.4437)	I
49	BEND	3123	3125	1	1	70.00 (90.000)	2485.00 ()	.00 (12104.496)	.00 (12443.988)	0 (1358.352)	0	0	(14.4851)	I
50	BEND	3125	3128	1	1	70.00 (90.000)	2485.00 ()	.00 (12088.992)	.00 (12425.868)	0 (1360.008)	0	0	(15.7926)	I
51	BEND	3128	3198	1	1	70.00 (90.000)	2485.00 ()	.00 (12083.231)	.00 (12402.959)	0 (1361.424)	0	0	(14.0421)	I
52	TANGENT	3198	3199	1	1	70.00	2485.00	.00	.00	0	0	1	II	
53	TANGENT	3199	3200	1	1	70.00	2485.00	.00	.00	0	0	1	II	
54	TANGENT	3200	3205	1	1	70.00	2485.00	.00	.00	0	0	1	II	
55	TANGENT	3205	3208	1	1	70.00	2485.00	.00	.00	0	0	1	II	
56	TANGENT	3208	3210	1	1	70.00	2485.00	.00	.00	0	0	1	II	

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PIPE ELEMENT INPUT DATA

ELEMENT NUMBER	ELEMENT TYPE	NODE -I	NODE -J	MATL. NUMBER	SECTION NUMBER	REFERENCE TEMPERATURE (BEND RADIUS)	DESIGN PRESSURE (THIRD POINT)	PEAK PRESSURE (X3-ORDINATE)	TEST PRESSURE (Y3-ORDINATE)	END CODES (Z3-ORDINATE)	END-I	END-J	NODE INCREMENT (BEND DEGREE)	INPUT TAG
57	BEND	3210	3212	1	1	70.00 (90.000)	2485.00 ()	.00 (12102.540)	.00 (12281.148)	0 (1366.788)	0	0	(14.1135)	I
58	BEND	3212	3215	1	1	70.00 (90.000)	2485.00 ()	.00 (12116.088)	.00 (12264.276)	0 (1368.072)	0	0	(13.3422)	I
59	BEND	3215	3220	1	1	70.00 (90.000)	2485.00 ()	.00 (12136.860)	.00 (12255.443)	0 (1369.428)	0	0	(15.2783)	I
60	BEND	3220	3222	1	1	70.00 (90.000)	2485.00 ()	.00 (12165.996)	.00 (12260.100)	0 (1370.712)	0	0	(21.8493)	I
61	BEND	3222	3225	1	1	70.00 (90.000)	2485.00 ()	.00 (12184.176)	.00 (12285.107)	0 (1372.584)	0	0	(17.2155)	I
62	BEND	3225	3230	1	1	70.00 (90.000)	2485.00 ()	.00 (12184.176)	.00 (12301.980)	0 (1373.424)	0	0	(4.2197)	I
63	TANGENT	3230	3235	1	1	70.00	2485.00	.00	.00	0	0	1	II	
64	TANGENT	3235	3237	1	1	70.00	2485.00	.00	.00	0	0	1	II	
65	BEND	3237	3238	1	1	70.00 (90.000)	2485.00 ()	.00 (12175.512)	.00 (12356.771)	0 (1375.872)	0	0	(10.3126)	I
66	BEND	3238	3240	1	1	70.00 (90.000)	2485.00 ()	.00 (12173.195)	.00 (12371.364)	0 (1382.556)	0	0	(10.2918)	I
67	BEND	3240	3243	1	1	70.00 (90.000)	2485.00 ()	.00 (12171.443)	.00 (12382.463)	0 (1394.292)	0	0	(10.3206)	I
68	BEND	3243	3245	1	1	70.00 (90.000)	2485.00 ()	.00 (12170.508)	.00 (12389.439)	0 (1409.352)	0	0	(10.2970)	I
69	TANGENT	3245	3250	1	1	70.00	2485.00	.00	.00	0	0	1	II	

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63	3230	0	0	0	0	0	0	12183.648	12305.256	1373.580	653.000
64	3235	0	0	0	0	0	0	12180.216	12327.000	1374.552	653.000
65	3237	0	0	0	0	0	0	12176.772	12348.756	1375.512	653.000
66	3238	0	0	0	0	0	0	12174.348	12364.068	1379.220	653.000
67	3240	0	0	0	0	0	0	12172.320	12376.908	1388.424	653.000
68	3243	0	0	0	0	0	0	12170.976	12385.451	1401.828	653.000
69	3245	0	0	0	0	0	0	12170.508	12388.439	1417.464	653.000
70	3250	0	0	0	0	0	0	12170.508	12388.439	1426.440	653.000

BENCHMARK PROBLEM 1
LOWER FREQUENCY AMPLIFIED RESPONSE

PRINT OF FREQUENCIES

MODE NUMBER	CIRCULAR FREQUENCY (RAD/SEC)	FREQUENCY (CYCLES/SEC)	PERIOD (SEC)
1	2.5512E+01	4.0603E+00	2.4625E-01
2	2.8440E+01	4.5264E+00	2.2093E-01
3	5.5624E+01	8.8529E+00	1.1296E-01
4	6.4766E+01	1.0308E+01	9.7014E-02
5	9.7405E+01	1.5502E+01	6.4506E-02
6	1.1767E+02	1.8727E+01	5.3399E-02
7	1.5015E+02	2.3947E+01	4.1759E-02
8	2.1843E+02	3.4765E+01	2.8762E-02
9	2.4101E+02	3.8358E+01	2.6070E-02
10	2.6393E+02	4.2006E+01	2.3806E-02
11	3.3596E+02	5.3469E+01	1.8702E-02
12	3.5162E+02	5.5962E+01	1.7869E-02
13	3.7303E+02	5.9369E+01	1.6844E-02

CASE 1

DIRECTION FACTORS

X = 1.0000 Y = 1.0000 Z = 1.0000

INDICATOR FOR DISPLACEMENT OR ACCELERATION SPECTRUM = 2

EQ.0 DISPLACEMENT
EQ.1 ACCELERATION IN IN./SEC.**2
EQ.2 ACCELERATION IN G**S

3 SPECTRA ARE ENTERED FOR CASE 1. KIND= 2

CLUSTER FACTOR, CF = .10000

MODAL PARTICIPATION FACTORS

MODE	FRQ(CPS)	X-DIRECTION	Y-DIRECTION	Z-DIRECTION
1	4.060	4.3933E+00	-8.7309E-01	-6.7365E-01
2	4.526	6.2265E-01	9.9705E-02	5.1094E+00
3	8.853	-1.6911E-01	-4.0210E+00	3.1963E+00
4	10.308	2.6566E-01	6.2655E+00	1.3027E+00
5	15.502	-1.5393E+00	-1.4277E+00	8.5860E-01
6	18.727	-5.7945E-01	2.1012E-01	5.8988E+00
7	23.947	-3.5289E+00	6.3336E-01	8.7766E-01
8	34.765	1.2325E+00	1.2767E+00	3.5926E-01
9	38.358	9.2594E-02	2.3447E+00	-5.6095E-02
10	42.006	4.0170E-01	2.3124E+00	7.3946E-01
11	53.469	-1.9780E+00	-7.9342E-01	6.5827E-01
12	55.962	-2.7436E+00	-2.1766E+00	2.6600E-01
13	59.369	2.3888E+00	4.7282E-01	1.3036E+00

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SPECTRUM TABLE (SEE ENVELOPED RESPONSE SPECTRUM X-DIRECTION)

NUMBER OF POINTS = 44
SCALE FACTOR = 1.00000E+00

INPUT POINT	PERIOD	SPECTRUM VALUE
1	1.6670E-02	9.9279E-01
2	2.8760E-02	9.9279E-01
3	3.1370E-02	1.2087E+00
4	3.1980E-02	1.2251E+00
5	3.2130E-02	1.2291E+00
6	3.2380E-02	1.2358E+00
7	3.3420E-02	1.2619E+00
8	3.3540E-02	1.2648E+00
9	3.4510E-02	1.2887E+00
10	3.5340E-02	1.3644E+00
11	3.9220E-02	1.6776E+00
12	3.9510E-02	1.6798E+00
13	4.2290E-02	1.6995E+00
14	4.3690E-02	1.7086E+00
15	4.6970E-02	2.2424E+00
16	4.9970E-02	2.5978E+00
17	5.0710E-02	2.6784E+00
18	5.4710E-02	3.0793E+00
19	5.5810E-02	3.1460E+00
20	5.8130E-02	3.2780E+00
21	5.8200E-02	3.2747E+00
22	6.3580E-02	3.0970E+00
23	7.0680E-02	2.9384E+00
24	7.4100E-02	2.8729E+00
25	7.4420E-02	2.8670E+00
26	7.8020E-02	2.8229E+00
27	7.9570E-02	2.7729E+00

28	8.1020E-02	2.7279E+00
29	8.2410E-02	2.6186E+00
30	8.3230E-02	2.5556E+00
31	8.4390E-02	2.4710E+00
32	9.1460E-02	2.3104E+00
33	1.0527E-01	1.6280E+00
34	1.2040E-01	1.4959E+00
35	1.2484E-01	1.4632E+00
36	1.3687E-01	1.3854E+00
37	1.4531E-01	1.3854E+00
38	1.5184E-01	1.3570E+00
39	1.6649E-01	1.2810E+00
40	1.7496E-01	1.3040E+00
41	1.8293E-01	1.3237E+00
42	1.9379E-01	1.3480E+00
43	2.5134E-01	1.6512E+00
44	2.6759E+00	1.6484E+00

SPECTRUM TABLE (SSE ENVELOPED RESPONSE SPECTRUM Y-DIRECTION)

NUMBER OF POINTS = 41
SCALE FACTOR = 1.00000E+00

INPUT POINT	PERIOD	SPECTRUM VALUE
1	1.6670E-02	7.6940E-01
2	2.8760E-02	7.6940E-01
3	3.1370E-02	8.4714E-01
4	3.1470E-02	8.5387E-01
5	3.1980E-02	8.8939E-01
6	3.2380E-02	9.1673E-01
7	3.3540E-02	9.9137E-01
8	3.3720E-02	1.0030E+00
9	3.4510E-02	1.0525E+00
10	3.7810E-02	1.0805E+00
11	3.9220E-02	1.0911E+00
12	4.3690E-02	1.3065E+00
13	4.5540E-02	1.5280E+00
14	4.6970E-02	1.6884E+00
15	5.2150E-02	2.4052E+00
16	5.4710E-02	2.7084E+00
17	5.5810E-02	2.8766E+00
18	5.8130E-02	3.2089E+00
19	5.8200E-02	3.2352E+00
20	6.0620E-02	3.5552E+00
21	6.3580E-02	3.9131E+00
22	7.4100E-02	3.5417E+00
23	7.4420E-02	3.5307E+00
24	7.8020E-02	3.4536E+00
25	8.1020E-02	3.4005E+00
26	8.2630E-02	3.3702E+00
27	8.3230E-02	3.3593E+00
28	8.3420E-02	3.3539E+00
29	8.4390E-02	3.3265E+00
30	9.1460E-02	2.4538E+00
31	1.0527E-01	2.0918E+00
32	1.1357E-01	1.9161E+00
33	1.3687E-01	1.5370E+00
34	1.4531E-01	1.4808E+00
35	1.5184E-01	1.4160E+00
36	1.7742E-01	1.1882E+00
37	1.9379E-01	1.0740E+00
38	1.9533E-01	1.0858E+00
39	1.9868E-01	1.1625E+00
40	2.5134E-01	2.1002E+00

41 2.6759E+00 2.1006E+00

SPECTRUM TABLE (SSE ENVELOPED RESPONSE SPECTRUM Z-DIRECTION

NUMBER OF POINTS = 35
SCALE FACTOR = 1.00000E+00

INPUT POINT	PERIOD	SPECTRUM VALUE
1	1.6670E-02	4.9573E-01
2	2.8760E-02	4.9573E-01
3	3.1370E-02	6.1060E-01
4	3.1980E-02	6.4481E-01
5	3.2170E-02	6.5540E-01
6	3.2380E-02	6.6695E-01
7	3.3540E-02	7.2740E-01
8	3.4510E-02	7.7690E-01
9	3.9220E-02	1.1935E+00
10	4.2100E-02	1.3731E+00
11	4.3690E-02	1.4625E+00
12	4.6970E-02	1.8340E+00
13	4.8080E-02	1.8851E+00
14	5.4710E-02	2.1468E+00
15	5.7010E-02	2.0653E+00
16	5.8130E-02	2.0280E+00
17	5.8200E-02	2.0258E+00
18	5.9690E-02	1.9862E+00
19	6.3580E-02	1.8919E+00
20	7.4100E-02	1.4623E+00
21	7.4420E-02	1.4585E+00
22	7.8020E-02	1.4035E+00
23	8.1020E-02	1.3160E+00
24	8.3230E-02	1.2231E+00
25	8.4390E-02	1.1896E+00
26	9.1460E-02	9.9374E-01
27	1.0527E-01	9.5498E-01
28	1.3687E-01	1.0833E+00
29	1.4531E-01	1.2296E+00
30	1.5184E-01	1.2296E+00
31	1.6595E-01	1.2476E+00
32	1.9379E-01	1.2755E+00
33	2.5134E-01	1.5055E+00
34	2.5450E-01	1.5018E+00
35	2.6759E+00	1.4604E+00

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CLUSTERING. +1 MEANS MODE I CLOSE TO I+1. -1, NOT.
-1. -1. -1. -1. -1. -1. -1. -1. 1. -1. 1. -1. 0.

NODE		DISPLACEMENTS / ROTATIONS						ACCELERATIONS IN G'S		
MODE	MODE	X-	Y-	Z-	X-	Y-	Z-	X-	Y-	Z-
NUMBER	NUMBER	TRANSLATION	TRANSLATION	TRANSLATION	ROTATION	ROTATION	ROTATION	DIRECTION	DIRECTION	DIRECTION
7090	TOTAL..	1.01142E-07	1.26989E-07	1.08367E-07	9.41604E-08	1.22968E-07	7.18680E-08	.000	.000	.000
3001	TOTAL..	1.76646E-04	1.87458E-04	2.69690E-04	1.32485E-05	1.70014E-05	8.92197E-06	.008	.009	.009
3005	TOTAL..	2.58576E-04	2.67670E-04	4.05527E-04	2.35473E-05	2.99857E-05	1.50020E-05	.011	.013	.013
3010	TOTAL..	4.00309E-04	4.03156E-04	6.45526E-04	4.32672E-05	5.46155E-05	2.59617E-05	.016	.019	.021
3011	TOTAL..	7.29717E-04	7.12119E-04	1.21971E-03	9.83873E-05	1.22560E-04	5.44305E-05	.029	.035	.037
3012	TOTAL..	1.67788E-03	1.52860E-03	2.96347E-03	1.87163E-04	2.29982E-04	9.52275E-05	.062	.074	.084
3019	TOTAL..	4.94287E-03	4.32164E-03	9.86047E-03	3.71465E-04	4.29866E-04	1.56730E-04	.167	.215	.257
3021	TOTAL..	7.78508E-03	7.22482E-03	1.84269E-02	5.35852E-04	5.63132E-04	1.87146E-04	.249	.385	.481
3023	TOTAL..	8.17764E-03	7.69741E-03	2.00335E-02	5.65558E-04	5.83525E-04	1.91153E-04	.260	.417	.525
3024	TOTAL..	9.96733E-03	9.68263E-03	2.80460E-02	7.02917E-04	6.65363E-04	2.10392E-04	.307	.561	.741
3026	TOTAL..	1.24282E-02	1.15043E-02	3.90458E-02	8.69497E-04	7.37609E-04	2.51249E-04	.368	.719	1.021
3028	TOTAL..	1.51015E-02	1.24056E-02	5.09290E-02	1.03558E-03	7.81713E-04	3.39864E-04	.430	.843	1.305
3030	TOTAL..	1.98846E-02	1.33372E-02	7.20230E-02	1.31908E-03	8.00867E-04	6.06049E-04	.530	.946	1.764
3032	TOTAL..	2.45497E-02	2.33966E-02	9.25115E-02	1.60358E-03	7.66361E-04	1.00798E-03	.610	.922	2.147
3035	TOTAL..	2.87425E-02	5.02107E-02	1.11011E-01	1.89119E-03	7.06931E-04	1.53445E-03	.665	.874	2.420
3037	TOTAL..	3.22692E-02	9.52179E-02	1.26689E-01	2.18290E-03	6.59848E-04	2.06729E-03	.692	.995	2.568
3038	TOTAL..	3.50810E-02	1.53332E-01	1.39332E-01	2.47639E-03	6.60980E-04	2.49545E-03	.695	1.260	2.588
3040	TOTAL..	3.72621E-02	2.21292E-01	1.49414E-01	2.77125E-03	7.21706E-04	2.83307E-03	.672	1.553	2.489
3044	TOTAL..	3.80024E-02	2.50299E-01	1.52916E-01	2.88844E-03	7.58716E-04	2.94580E-03	.655	1.661	2.421
3047	TOTAL..	3.83374E-02	2.64826E-01	1.54566E-01	2.94578E-03	7.78588E-04	2.99714E-03	.646	1.709	2.383
3050	TOTAL..	3.86479E-02	2.78406E-01	1.56064E-01	2.99873E-03	7.97720E-04	3.04265E-03	.637	1.751	2.346

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3053 TOTAL..	3.89095E-02	2.90397E-01	1.57092E-01	3.04499E-03	8.15093E-04	3.08103E-03	.628	1.786	2.310
3056 TOTAL..	3.93605E-02	3.10216E-01	1.56926E-01	3.12059E-03	8.45526E-04	3.14161E-03	.613	1.838	2.237
3059 TOTAL..	3.94739E-02	3.13798E-01	1.56573E-01	3.13422E-03	8.51335E-04	3.15232E-03	.611	1.846	2.222
3062 TOTAL..	4.02049E-02	3.28265E-01	1.54236E-01	3.18933E-03	8.75685E-04	3.19506E-03	.598	1.879	2.155
3065 TOTAL..	4.37922E-02	3.54993E-01	1.46310E-01	3.29198E-03	9.24250E-04	3.27235E-03	.576	1.932	2.010
3068 TOTAL..	4.78000E-02	3.68288E-01	1.39779E-01	3.34475E-03	9.51370E-04	3.31164E-03	.565	1.954	1.924
3071 TOTAL..	6.22069E-02	3.95046E-01	1.21640E-01	3.45561E-03	1.01206E-03	3.39307E-03	.551	1.991	1.729
3074 TOTAL..	6.60349E-02	3.99504E-01	1.17302E-01	3.47585E-03	1.02403E-03	3.40801E-03	.551	1.996	1.692
3077 TOTAL..	7.01465E-02	4.03898E-01	1.12783E-01	3.49616E-03	1.03619E-03	3.42300E-03	.552	2.001	1.654
3080 TOTAL..	1.36517E-01	4.47304E-01	4.93154E-02	3.73475E-03	1.19117E-03	3.59828E-03	.656	2.040	1.279
3083 TOTAL..	1.82805E-01	4.55179E-01	3.36344E-02	3.85591E-03	1.27884E-03	3.68708E-03	.781	2.046	1.213
3086 TOTAL..	1.96131E-01	4.55229E-01	4.10160E-02	3.88866E-03	1.30324E-03	3.71114E-03	.819	2.048	1.221
3089 TOTAL..	2.32100E-01	4.55337E-01	7.23778E-02	3.96996E-03	1.37055E-03	3.77428E-03	.920	2.051	1.279
3092 TOTAL..	3.01763E-01	4.55570E-01	1.43670E-01	4.10063E-03	1.50517E-03	3.89928E-03	1.096	2.057	1.488
3095 TOTAL..	3.48158E-01	4.55717E-01	1.92473E-01	4.16973E-03	1.59696E-03	3.96026E-03	1.189	2.061	1.664
3098 TOTAL..	3.55282E-01	4.55741E-01	1.99988E-01	4.17917E-03	1.61116E-03	3.97078E-03	1.202	2.061	1.692
3100 TOTAL..	4.37514E-01	4.56006E-01	2.86593E-01	4.26798E-03	1.77627E-03	4.08571E-03	1.312	2.068	2.027
3101 TOTAL..	5.22092E-01	4.56275E-01	3.74856E-01	4.32524E-03	1.94721E-03	4.19365E-03	1.373	2.073	2.369
3104 TOTAL..	5.25238E-01	4.56292E-01	3.78124E-01	4.32679E-03	1.95359E-03	4.19754E-03	1.375	2.074	2.382
3107 TOTAL..	5.71121E-01	4.56442E-01	4.25437E-01	4.34534E-03	2.04630E-03	4.25319E-03	1.394	2.077	2.563
3110 TOTAL..	6.40514E-01	4.51043E-01	4.96846E-01	4.36135E-03	2.18477E-03	4.33695E-03	1.422	2.082	2.799
3113 TOTAL..	7.01978E-01	4.29053E-01	5.61503E-01	4.36702E-03	2.30668E-03	4.41878E-03	1.453	2.084	2.904

3115 TOTAL..	7.83366E-01	3.66738E-01	6.51131E-01	4.36572E-03	2.47896E-03	4.56261E-03	1.514	2.071	2.831
3116 TOTAL..	8.31968E-01	2.65265E-01	7.18215E-01	4.35827E-03	2.64196E-03	4.75433E-03	1.556	2.025	2.378
3119 TOTAL..	8.31716E-01	2.19638E-01	7.31347E-01	4.35458E-03	2.70634E-03	4.84933E-03	1.557	1.992	2.089
3120 TOTAL..	8.31385E-01	1.81211E-01	7.50374E-01	4.35235E-03	2.77187E-03	4.96639E-03	1.559	1.948	1.822
3122 TOTAL..	8.31037E-01	1.81118E-01	7.72131E-01	4.35285E-03	2.81892E-03	5.07791E-03	1.561	1.909	1.745
3123 TOTAL..	8.13888E-01	2.42169E-01	7.91822E-01	4.35659E-03	2.85667E-03	5.21508E-03	1.555	1.884	1.969
3125 TOTAL..	7.49057E-01	3.19441E-01	7.72453E-01	4.35644E-03	2.87572E-03	5.31804E-03	1.522	1.893	2.320
3128 TOTAL..	6.37794E-01	3.81372E-01	7.15395E-01	4.33680E-03	2.88637E-03	5.38482E-03	1.452	1.915	2.596
3198 TOTAL..	5.20098E-01	3.94377E-01	6.39233E-01	4.28678E-03	2.89077E-03	5.39546E-03	1.331	1.921	2.577
3199 TOTAL..	4.13138E-01	3.78346E-01	5.61851E-01	4.20530E-03	2.89294E-03	5.36113E-03	1.165	1.912	2.398
3200 TOTAL..	3.07025E-01	3.62338E-01	4.89110E-01	4.09036E-03	2.89497E-03	5.28268E-03	.944	1.897	2.248
3205 TOTAL..	1.99489E-01	3.45807E-01	4.21121E-01	3.93404E-03	2.89525E-03	5.15459E-03	.671	1.876	2.155
3208 TOTAL..	9.78376E-02	3.30101E-01	3.64920E-01	3.74374E-03	2.89227E-03	4.98492E-03	.384	1.846	2.160
3210 TOTAL..	3.28465E-03	3.14861E-01	3.21896E-01	3.51492E-03	2.88483E-03	4.77324E-03	.282	1.804	2.273
3212 TOTAL..	9.91890E-02	2.86523E-01	2.87306E-01	3.21700E-03	2.87528E-03	4.48852E-03	.691	1.695	2.468
3215 TOTAL..	1.64147E-01	2.22446E-01	2.52670E-01	2.87303E-03	2.85796E-03	4.14799E-03	1.017	1.404	2.570
3220 TOTAL..	1.89954E-01	1.33182E-01	2.13905E-01	2.44141E-03	2.75821E-03	3.65814E-03	1.146	.993	2.585
3222 TOTAL..	1.53972E-01	3.84199E-02	1.56730E-01	1.92673E-03	2.37015E-03	2.81099E-03	1.005	.630	2.356
3225 TOTAL..	9.70265E-02	2.82110E-02	1.08654E-01	1.67833E-03	1.88895E-03	2.11739E-03	.872	.599	1.869
3230 TOTAL..	8.39847E-02	2.76430E-02	9.78676E-02	1.62476E-03	1.76666E-03	1.95810E-03	.845	.592	1.713
3235 TOTAL..	4.81444E-02	2.53267E-02	6.57104E-02	1.43159E-03	1.37747E-03	1.48447E-03	.732	.558	1.193
3237 TOTAL..	2.21937E-02	2.40702E-02	3.77921E-02	1.20248E-03	1.00664E-03	1.09210E-03	.570	.518	.713

3238 TOTAL..	1.03577E-02	2.19825E-02	2.06520E-02	1.00198E-03	7.46964E-04	8.45968E-04	.425	.464	.404
3240 TOTAL..	5.24121E-03	1.51471E-02	8.36914E-03	7.69420E-04	5.04066E-04	6.08166E-04	.258	.328	.172
3243 TOTAL..	2.68993E-03	6.97777E-03	1.84930E-03	4.99587E-04	2.87692E-04	3.66483E-04	.110	.162	.041
3245 TOTAL..	5.52972E-04	1.20045E-03	6.56142E-05	1.90228E-04	9.85802E-05	1.27414E-04	.019	.033	.001
3250 TOTAL..	1.22349E-07	2.43266E-07	1.65654E-07	1.65874E-07	8.41523E-08	8.25011E-08	.000	.000	.000

RESPONSE SPECTRUM STRESS COMPONENTS (KIND = 2)

OR EACH ELEMENT, THE FOLLOWING INFORMATION IS PRINTED:

1. FOR EACH EARTH QUAKE DIRECTION; THE NUMBER OF THE MODE WITH THE LARGEST STRESS.
 2. THE VALUE OF THAT STRESS.
 3. IF REQUESTED; THE MODE BY MODE STRESSES FOR EACH EARTH QUAKE DIRECTION.
 4. THE RESULTANT FOR EACH EARTH QUAKE DIRECTION.
 5. THE GRAND TOTAL OF THE THREE EARTH QUAKE DIRECTIONS.
- ** (NOTE: THE X, Y, OR Z REFERS TO THE EARTH QUAKE DIRECTION.)

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (1)

	PX(I)	VY(I)	VE(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	1	1	5	1	5	1	1	1	5	1	5	1
X MAXIMUM	4.569E+03	-1.013E+04	3.703E+03	1.113E+05	-4.130E+05	-7.537E+05	4.569E+03	-1.013E+04	3.703E+03	1.113E+05	-3.436E+05	-5.639E+05
Y	4	1	5	5	4	1	4	1	5	5	4	1
Y MAXIMUM	-9.717E+03	2.491E+03	4.332E+03	7.932E+04	5.954E+05	1.853E+05	-9.717E+03	2.491E+03	4.332E+03	7.932E+04	5.477E+05	1.387E+05
Z	3	1	6	2	6	2	3	1	6	2	6	2
Z MAXIMUM	1.248E+03	1.420E+03	-7.600E+03	-2.896E+05	8.164E+05	1.453E+05	1.248E+03	1.420E+03	-7.600E+03	-2.896E+05	6.740E+05	1.438E+05
GRAND TOTAL	1.200E+04	1.108E+04	1.073E+04	4.017E+05	1.430E+06	8.439E+05	1.200E+04	1.108E+04	1.073E+04	4.017E+05	1.251E+06	6.411E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (2)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	1	1	5	1	5	1	1	1	5	1	5	1
X MAXIMUM	4.565E+03	-1.013E+04	3.703E+03	1.112E+05	-3.436E+05	-5.639E+05	4.565E+03	-1.013E+04	3.703E+03	1.112E+05	-3.270E+05	-5.184E+05
Y	4	1	5	5	4	1	4	1	5	5	4	1
Y MAXIMUM	-9.718E+03	2.491E+03	4.332E+03	7.916E+04	5.478E+05	1.387E+05	-9.718E+03	2.491E+03	4.332E+03	7.916E+04	5.363E+05	1.275E+05
Z	3	1	6	2	6	2	3	1	6	2	6	2
Z MAXIMUM	1.248E+03	1.420E+03	-7.598E+03	-2.898E+05	6.740E+05	1.438E+05	1.248E+03	1.420E+03	-7.598E+03	-2.898E+05	6.399E+05	1.435E+05
GRAND TOTAL	1.200E+04	1.108E+04	1.073E+04	4.016E+05	1.251E+06	6.412E+05	1.200E+04	1.108E+04	1.073E+04	4.016E+05	1.209E+06	5.931E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (3)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	1	1	5	1	5	1	1	1	5	1	5	1
X MAXIMUM	4.565E+03	-1.013E+04	3.702E+03	1.112E+05	-3.270E+05	-5.184E+05	4.565E+03	-1.013E+04	3.702E+03	1.112E+05	-3.104E+05	-4.729E+05
Y	4	1	5	5	4	1	4	1	5	5	4	1
Y MAXIMUM	-9.718E+03	2.491E+03	4.331E+03	7.916E+04	5.363E+05	1.275E+05	-9.718E+03	2.491E+03	4.331E+03	7.916E+04	5.249E+05	1.163E+05
Z	3	1	6	2	6	2	3	1	6	2	6	2
Z MAXIMUM	1.248E+03	1.420E+03	-7.595E+03	-2.898E+05	6.399E+05	1.435E+05	1.248E+03	1.420E+03	-7.595E+03	-2.898E+05	6.058E+05	1.431E+05
GRAND TOTAL	1.200E+04	1.108E+04	1.073E+04	4.016E+05	1.209E+06	5.931E+05	1.200E+04	1.108E+04	1.073E+04	4.016E+05	1.168E+06	5.453E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (4)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	1	1	5	1	5	1	1	1	5	1	5	1
X MAXIMUM	4.550E+03	-1.014E+04	3.690E+03	1.142E+05	-3.104E+05	-4.721E+05	4.550E+03	-1.014E+04	3.690E+03	1.142E+05	-2.915E+05	-4.202E+05
Y	4	1	5	5	4	1	4	1	5	5	4	1
Y MAXIMUM	-9.702E+03	2.493E+03	4.317E+03	7.894E+04	5.255E+05	1.161E+05	-9.702E+03	2.493E+03	4.317E+03	7.894E+04	5.122E+05	-1.035E+05
Z	3	1	6	2	6	2	3	1	6	2	6	2
Z MAXIMUM	1.255E+03	1.421E+03	-7.600E+03	-2.911E+05	6.061E+05	1.386E+05	1.255E+03	1.421E+03	-7.600E+03	-2.911E+05	5.778E+05	1.383E+05
GRAND TOTAL	1.199E+04	1.108E+04	1.073E+04	4.029E+05	1.169E+06	5.428E+05	1.199E+04	1.108E+04	1.073E+04	4.029E+05	1.122E+06	4.886E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (5)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	1	1	5	1	5	1	1	1	5	1	5	1
X MAXIMUM	4.564E+03	-1.013E+04	3.691E+03	1.134E+05	-2.915E+05	-4.205E+05	4.564E+03	-1.013E+04	3.691E+03	1.134E+05	-2.598E+05	-3.337E+05
Y	4	1	5	5	4	1	4	1	5	5	4	1
Y MAXIMUM	-9.706E+03	2.491E+03	4.318E+03	7.932E+04	5.119E+05	-1.040E+05	-9.706E+03	2.491E+03	4.318E+03	7.932E+04	4.898E+05	-9.484E+04
Z	3	1	6	2	6	2	3	1	6	2	6	2
Z MAXIMUM	1.253E+03	1.420E+03	-7.591E+03	-2.902E+05	-5.779E+05	1.396E+05	1.253E+03	1.420E+03	-7.591E+03	-2.902E+05	-5.702E+05	1.389E+05
GRAND TOTAL	1.200E+04	1.107E+04	1.072E+04	4.026E+05	1.122E+06	4.895E+05	1.200E+04	1.107E+04	1.072E+04	4.026E+05	1.046E+06	4.006E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (6)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(C)	VY(C)	VZ(C)	TX(C)	MY(C)	MZ(C)
X	1	1	1	1	5	1	1	1	1	1	5	1
X MAXIMUM	4.559E+03	-9.464E+03	-3.774E+03	1.125E+05	-2.300E+05	-2.778E+05	3.564E+03	-9.881E+03	-3.774E+03	1.295E+05	-2.078E+05	-1.883E+05
Y	4	5	5	5	4	4	4	1	5	5	4	4
Y MAXIMUM	-9.713E+03	-2.528E+03	3.541E+03	7.907E+04	4.778E+05	1.438E+05	-9.637E+03	2.430E+03	3.541E+03	5.274E+04	4.562E+05	1.369E+05
Z	3	6	6	2	2	6	3	6	6	2	2	6
Z MAXIMUM	1.250E+03	3.040E+03	-6.940E+03	-2.903E+05	-5.696E+05	2.041E+05	1.282E+03	3.129E+03	-6.940E+03	-3.468E+05	-5.292E+05	1.756E+05
GRAND TOTAL	1.200E+04	1.128E+04	1.039E+04	4.021E+05	1.016E+06	4.712E+05	1.169E+04	1.160E+04	1.039E+04	4.187E+05	9.317E+05	3.840E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (6)

	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	7	1	1	1	5	1
X MAXIMUM	-3.200E+03	-1.019E+04	-3.774E+03	1.416E+05	-1.834E+05	-9.544E+04
Y	4	1	5	3	4	4
Y MAXIMUM	-9.460E+03	2.507E+03	3.541E+03	-4.072E+04	4.299E+05	1.209E+05
Z	3	6	6	2	2	6
Z MAXIMUM	1.301E+03	3.185E+03	-6.940E+03	-3.988E+05	-4.832E+05	1.464E+05
GRAND TOTAL	1.136E+04	1.192E+04	1.039E+04	4.527E+05	8.399E+05	3.053E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (7)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(C)	VY(C)	VZ(C)	TX(C)	MY(C)	MZ(C)
X	7	1	1	1	5	1	7	1	1	1	5	5
X MAXIMUM	-3.371E+03	-1.037E+04	-3.988E+03	1.528E+05	-1.834E+05	-9.467E+04	-3.446E+03	-1.042E+04	-3.988E+03	1.573E+05	-1.591E+05	-7.513E+04
Y	4	4	5	4	4	4	4	4	5	4	4	4
Y MAXIMUM	-9.071E+03	3.564E+03	3.470E+03	9.180E+04	4.187E+05	1.290E+05	-8.722E+03	4.348E+03	3.470E+03	1.274E+05	3.884E+05	9.768E+04
Z	3	6	6	2	2	6	3	6	6	2	2	2
Z MAXIMUM	1.299E+03	3.300E+03	-6.763E+03	-4.631E+05	-4.199E+05	1.545E+05	1.290E+03	3.286E+03	-6.763E+03	-4.979E+05	-3.711E+05	-1.379E+05
GRAND TOTAL	1.092E+04	1.227E+04	1.026E+04	5.133E+05	7.990E+05	3.190E+05	1.066E+04	1.249E+04	1.026E+04	5.539E+05	7.074E+05	2.673E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (7)

	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	7	1	1	1	5	1
X MAXIMUM	-3.494E+03	-1.039E+04	-3.988E+03	1.579E+05	-1.335E+05	7.023E+04
Y	4	4	5	4	4	3
Y MAXIMUM	-8.306E+03	5.098E+03	3.470E+03	1.601E+05	3.550E+05	-1.014E+05
Z	3	6	6	2	2	2
Z MAXIMUM	1.271E+03	3.246E+03	-6.763E+03	-5.283E+05	-3.194E+05	-1.350E+05
GRAND TOTAL	1.043E+04	1.269E+04	1.026E+04	5.924E+05	6.135E+05	2.462E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (8)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(C)	VY(C)	VZ(C)	TX(C)	MY(C)	MZ(C)
X	7	1	1	1	5	5	7	1	1	1	5	1
X MAXIMUM	-3.510E+03	-9.739E+03	-5.088E+03	1.558E+05	-1.217E+05	-7.794E+04	-3.509E+03	-9.709E+03	-5.088E+03	1.551E+05	-1.171E+05	7.825E+04
Y	4	4	5	4	4	3	4	4	5	4	4	3
Y MAXIMUM	-7.734E+03	6.196E+03	3.296E+03	1.979E+05	3.271E+05	-1.138E+05	-7.637E+03	6.314E+03	3.296E+03	2.029E+05	3.215E+05	-1.147E+05
Z	3	6	6	2	6	2	3	6	6	2	6	2
Z MAXIMUM	1.223E+03	3.840E+03	-6.267E+03	-5.608E+05	2.650E+05	-1.584E+05	1.219E+03	3.827E+03	-6.267E+03	-5.645E+05	2.561E+05	-1.578E+05
GRAND TOTAL	1.018E+04	1.278E+04	1.021E+04	6.374E+05	5.427E+05	2.959E+05	1.016E+04	1.281E+04	1.021E+04	6.429E+05	5.272E+05	2.932E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (8)

	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	7	1	1	1	5	1
X MAXIMUM	-3.507E+03	-9.676E+03	-5.088E+03	1.543E+05	-1.124E+05	9.171E+04
Y	4	4	5	4	4	3
Y MAXIMUM	-7.539E+03	6.431E+03	3.296E+03	2.078E+05	3.158E+05	-1.158E+05
Z	3	6	6	2	6	2
Z MAXIMUM	1.214E+03	3.812E+03	-6.267E+03	-5.680E+05	2.471E+05	-1.572E+05
GRAND TOTAL	1.013E+04	1.283E+04	1.021E+04	6.482E+05	5.119E+05	2.915E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (9)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	7	1	5	1	5	1	7	1	5	1	5	1
X MAXIMUM	-3.493E+03	-1.088E+04	3.011E+03	1.529E+05	-1.337E+05	1.110E+05	-3.493E+03	-1.088E+04	3.011E+03	1.529E+05	-9.507E+04	2.505E+05
Y	4	4	4	4	4	4	4	4	4	4	4	4
Y MAXIMUM	-7.405E+03	4.795E+03	-4.848E+03	2.142E+05	3.090E+05	-8.732E+04	-7.405E+03	4.795E+03	-4.848E+03	2.142E+05	2.469E+05	-1.488E+05
Z	3	1	6	2	6	2	3	1	6	2	6	2
Z MAXIMUM	1.209E+03	1.525E+03	-7.209E+03	-5.723E+05	2.746E+05	-3.068E+04	1.209E+03	1.525E+03	-7.209E+03	-5.723E+05	-2.523E+05	-3.512E+04
GRAND TOTAL	1.009E+04	1.264E+04	1.037E+04	6.547E+05	5.594E+05	1.601E+05	1.009E+04	1.264E+04	1.037E+04	6.547E+05	4.455E+05	3.157E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (10)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	7	1	5	1	5	1	7	1	5	1	5	1
X MAXIMUM	-3.476E+03	-1.087E+04	2.913E+03	1.526E+05	-9.507E+04	2.507E+05	-3.476E+03	-1.087E+04	2.913E+03	1.526E+05	-4.960E+04	4.204E+05
Y	4	4	4	4	4	4	4	4	4	4	4	4
Y MAXIMUM	-7.405E+03	4.802E+03	-4.780E+03	2.143E+05	2.469E+05	-1.486E+05	-7.405E+03	4.802E+03	-4.780E+03	2.143E+05	1.722E+05	-2.235E+05
Z	3	1	6	2	6	2	3	1	6	2	6	2
Z MAXIMUM	1.208E+03	1.524E+03	-6.917E+03	-5.723E+05	-2.523E+05	-3.514E+04	1.208E+03	1.524E+03	-6.917E+03	-5.723E+05	-2.388E+05	-5.894E+04
GRAND TOTAL	1.006E+04	1.260E+04	1.004E+04	6.547E+05	4.455E+05	3.159E+05	1.006E+04	1.260E+04	1.004E+04	6.547E+05	3.292E+05	5.104E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (11)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	7	1	5	1	5	1	7	1	5	1	5	1
X MAXIMUM	-3.456E+03	-1.087E+04	2.768E+03	1.526E+05	-4.960E+04	4.204E+05	-3.456E+03	-1.087E+04	2.768E+03	1.526E+05	-2.961E+04	5.900E+05
Y	4	4	4	4	4	4	4	4	4	4	4	4
Y MAXIMUM	-7.410E+03	4.815E+03	-4.664E+03	2.143E+05	1.722E+05	-2.235E+05	-7.410E+03	4.815E+03	-4.664E+03	2.143E+05	9.942E+04	-2.987E+05
Z	3	1	6	2	6	2	3	1	6	2	6	2
Z MAXIMUM	1.206E+03	1.523E+03	-6.471E+03	-5.723E+05	-2.388E+05	-5.894E+04	1.206E+03	1.523E+03	-6.471E+03	-5.723E+05	-2.255E+05	-8.272E+04
GRAND TOTAL	1.004E+04	1.257E+04	9.527E+03	6.547E+05	3.292E+05	5.104E+05	1.004E+04	1.257E+04	9.527E+03	6.547E+05	2.593E+05	7.057E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (12)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	7	1	5	1	5	1	7	1	5	1	5	1
X MAXIMUM	-3.429E+03	-1.085E+04	2.516E+03	1.531E+05	-2.961E+04	5.899E+05	-3.429E+03	-1.085E+04	2.516E+03	1.531E+05	6.072E+04	8.794E+05
Y	4	4	4	4	4	4	4	4	4	4	4	4
Y MAXIMUM	-7.420E+03	4.844E+03	-4.451E+03	2.141E+05	9.942E+04	-2.989E+05	-7.420E+03	4.844E+03	-4.451E+03	2.141E+05	7.103E+04	-4.281E+05
Z	3	1	6	2	6	2	3	1	6	2	6	2
Z MAXIMUM	1.203E+03	1.521E+03	-5.693E+03	-5.723E+05	-2.255E+05	-8.270E+04	1.203E+03	1.521E+03	-5.693E+03	-5.723E+05	-2.037E+05	-1.233E+05
GRAND TOTAL	1.001E+04	1.254E+04	8.653E+03	6.548E+05	2.593E+05	7.056E+05	1.001E+04	1.254E+04	8.653E+03	6.548E+05	2.968E+05	1.039E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (13)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	7	1	5	1	5	1	7	1	5	1	5	1
X MAXIMUM	-3.393E+03	-1.084E+04	2.074E+03	1.537E+05	6.072E+04	8.793E+05	-3.393E+03	-1.084E+04	2.074E+03	1.537E+05	1.160E+05	1.168E+06
Y	4	4	4	4	4	4	4	4	4	4	4	4
Y MAXIMUM	-7.429E+03	4.930E+03	-4.071E+03	2.138E+05	7.103E+04	-4.282E+05	-7.429E+03	4.930E+03	-4.071E+03	2.138E+05	1.357E+05	-5.596E+05
Z	3	1	6	2	6	2	3	1	6	2	6	2
Z MAXIMUM	1.200E+03	1.520E+03	-4.344E+03	-5.723E+05	-2.037E+05	-1.233E+05	1.200E+03	1.520E+03	-4.344E+03	-5.723E+05	-2.944E+05	-1.638E+05
GRAND TOTAL	9.977E+03	1.258E+04	7.190E+03	6.549E+05	2.968E+05	1.039E+06	9.977E+03	1.258E+04	7.190E+03	6.549E+05	4.253E+05	1.373E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (14)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	7	1	5	1	5	1	7	1	5	1	5	1
X MAXIMUM	-3.354E+03	-1.085E+04	1.520E+03	1.532E+05	1.160E+05	1.168E+06	-3.354E+03	-1.085E+04	1.520E+03	1.532E+05	1.565E+05	1.458E+06
Y	4	4	4	4	4	4	4	4	4	4	4	4
Y MAXIMUM	-7.433E+03	5.105E+03	-3.588E+03	2.140E+05	1.357E+05	-5.595E+05	-7.433E+03	5.105E+03	-3.588E+03	2.140E+05	-2.234E+05	-6.955E+05
Z	3	1	6	2	6	2	3	1	6	2	6	2
Z MAXIMUM	1.197E+03	1.522E+03	-2.685E+03	-5.723E+05	-2.944E+05	-1.638E+05	1.197E+03	1.522E+03	-2.685E+03	-5.723E+05	-3.660E+05	-2.044E+05
GRAND TOTAL	9.940E+03	1.275E+04	5.506E+03	6.548E+05	4.253E+05	1.373E+06	9.940E+03	1.275E+04	5.506E+03	6.548E+05	5.404E+05	1.710E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (15)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	7	1	5	1	5	1	7	1	5	1	5	1
X MAXIMUM	-3.313E+03	6.168E+03	8.814E+02	1.530E+05	1.565E+05	1.458E+06	-3.313E+03	6.168E+03	8.814E+02	1.530E+05	1.800E+05	1.293E+06
Y	4	4	4	4	4	4	4	4	4	4	4	4
Y MAXIMUM	-7.437E+03	-1.225E+04	-3.002E+03	2.141E+05	-2.234E+05	-6.955E+05	-7.437E+03	-1.225E+04	-3.002E+03	2.141E+05	-3.034E+05	-3.689E+05
Z	3	2	6	2	6	1	3	2	6	2	6	1
Z MAXIMUM	1.154E+03	-3.677E+03	-8.060E+02	-5.723E+05	-3.660E+05	-2.044E+05	1.194E+03	-3.677E+03	-8.060E+02	-5.723E+05	-3.875E+05	-1.813E+05
GRAND TOTAL	9.904E+03	1.643E+04	3.910E+03	6.547E+05	5.404E+05	1.710E+06	9.904E+03	1.643E+04	3.910E+03	6.547E+05	6.136E+05	1.407E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (16)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	7	1	1	1	5	1	7	1	1	1	5	1
X MAXIMUM	-3.270E+03	6.063E+03	3.717E+02	1.537E+05	1.800E+05	1.293E+06	-3.270E+03	6.063E+03	3.717E+02	1.537E+05	1.851E+05	1.132E+06
Y	4	4	4	4	4	4	4	4	4	4	4	4
Y MAXIMUM	-7.443E+03	-1.173E+04	-2.333E+03	2.139E+05	-3.034E+05	-3.690E+05	-7.443E+03	-1.173E+04	-2.333E+03	2.139E+05	-3.656E+05	-2.783E+05
Z	3	2	6	2	6	1	3	2	6	2	6	2
Z MAXIMUM	1.191E+03	-3.660E+03	1.179E+03	-5.723E+05	-3.875E+05	-1.813E+05	1.191E+03	-3.660E+03	1.179E+03	-5.723E+05	-3.560E+05	1.633E+05
GRAND TOTAL	9.868E+03	1.579E+04	3.142E+03	6.548E+05	6.136E+05	1.407E+06	9.868E+03	1.579E+04	3.142E+03	6.548E+05	6.387E+05	1.193E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (17)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	7	1	5	1	5	1	7	1	5	1	5	1
X MAXIMUM	-3.224E+03	5.881E+03	-5.139E+02	1.532E+05	1.851E+05	1.132E+06	-3.224E+03	5.881E+03	-5.139E+02	1.532E+05	1.714E+05	9.749E+05
Y	4	4	4	4	4	4	4	4	4	4	4	4
Y MAXIMUM	-7.445E+03	-1.096E+04	-1.620E+03	2.139E+05	-3.656E+05	-2.783E+05	-7.445E+03	-1.096E+04	-1.620E+03	2.139E+05	-4.088E+05	-2.397E+05
Z	3	2	6	2	6	2	3	2	6	2	6	2
Z MAXIMUM	1.188E+03	-3.638E+03	3.151E+03	-5.724E+05	-3.560E+05	1.630E+05	1.188E+03	-3.638E+03	3.151E+03	-5.724E+05	-2.720E+05	2.600E+05
GRAND TOTAL	9.832E+03	1.487E+04	3.922E+03	6.548E+05	6.387E+05	1.193E+06	9.832E+03	1.487E+04	3.922E+03	6.548E+05	6.211E+05	1.101E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (18)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	7	1	5	1	5	1	7	1	5	1	5	1
X MAXIMUM	-3.192E+03	5.690E+03	-9.870E+02	1.539E+05	1.714E+05	9.748E+05	-3.192E+03	5.690E+03	-9.870E+02	1.539E+05	1.610E+05	9.148E+05
Y	4	4	4	4	4	4	4	4	4	4	4	4
Y MAXIMUM	-7.447E+03	-1.026E+04	-1.155E+03	2.141E+05	-4.088E+05	-2.397E+05	-7.447E+03	-1.026E+04	-1.155E+03	2.141E+05	-4.204E+05	-3.438E+05
Z	3	2	6	2	6	2	3	2	6	2	6	2
Z MAXIMUM	1.185E+03	-3.623E+03	4.441E+03	-5.722E+05	-2.720E+05	2.604E+05	1.185E+03	-3.623E+03	4.441E+03	-5.722E+05	-2.252E+05	2.986E+05
GRAND TOTAL	9.808E+03	1.405E+04	5.002E+03	6.548E+05	6.211E+05	1.101E+06	9.808E+03	1.405E+04	5.002E+03	6.548E+05	6.060E+05	1.100E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (19)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	7	1	5	1	5	1	7	1	5	1	5	1
X MAXIMUM	-3.178E+03	5.598E+03	-1.194E+03	1.483E+05	1.610E+05	9.157E+05	-3.178E+03	5.598E+03	-1.194E+03	1.483E+05	1.549E+05	8.869E+05
Y	4	4	4	4	4	4	4	4	4	4	4	4
Y MAXIMUM	-7.442E+03	-9.930E+03	-1.397E+03	2.120E+05	-4.204E+05	3.451E+05	-7.442E+03	-9.930E+03	-1.397E+03	2.120E+05	-4.253E+05	3.961E+05
Z	3	2	6	2	6	2	3	2	6	2	6	2
Z MAXIMUM	1.186E+03	-3.617E+03	4.967E+03	-5.740E+05	-2.252E+05	2.951E+05	1.186E+03	-3.617E+03	4.967E+03	-5.740E+05	-1.997E+05	3.136E+05
GRAND TOTAL	9.790E+03	1.368E+04	5.527E+03	6.547E+05	6.060E+05	1.100E+06	9.790E+03	1.368E+04	5.527E+03	6.547E+05	5.977E+05	1.106E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (20)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	7	1	5	1	5	1	7	1	5	1	5	1
X MAXIMUM	-3.169E+03	5.535E+03	-1.285E+03	1.536E+05	1.549E+05	8.860E+05	-3.169E+03	5.535E+03	-1.285E+03	1.536E+05	1.488E+05	8.598E+05
Y	4	4	4	4	4	4	4	4	4	4	4	4
Y MAXIMUM	-7.457E+03	-9.716E+03	-1.504E+03	2.144E+05	-4.253E+05	3.949E+05	-7.457E+03	-9.716E+03	-1.504E+03	2.144E+05	-4.290E+05	4.409E+05
Z	3	2	6	2	6	2	3	2	6	2	6	2
Z MAXIMUM	1.181E+03	-3.613E+03	5.255E+03	-5.721E+05	-1.997E+05	3.171E+05	1.181E+03	-3.613E+03	5.255E+03	-5.721E+05	-1.748E+05	3.342E+05
GRAND TOTAL	9.794E+03	1.344E+04	5.815E+03	6.547E+05	5.977E+05	1.106E+06	9.794E+03	1.344E+04	5.815E+03	6.547E+05	5.899E+05	1.115E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (21)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(C)	VY(C)	VZ(C)	TX(C)	MY(C)	MZ(C)
X	7	1	5	1	5	1	7	1	5	1	5	1
X MAXIMUM	-3.160E+03	5.476E+03	-1.389E+03	1.544E+05	1.488E+05	8.596E+05	-3.175E+03	5.529E+03	-1.389E+03	1.561E+05	1.470E+05	8.482E+05
Y	4	4	5	4	4	4	4	4	5	4	4	4
Y MAXIMUM	-7.458E+03	-9.518E+03	-1.625E+03	2.148E+05	-4.290E+05	4.407E+05	-7.675E+03	-9.344E+03	-1.625E+03	2.048E+05	-4.353E+05	4.602E+05
Z	3	2	6	2	6	2	3	2	6	2	6	2
Z MAXIMUM	1.181E+03	-3.610E+03	5.537E+03	-5.718E+05	-1.748E+05	3.347E+05	1.230E+03	-3.606E+03	5.537E+03	-5.746E+05	-1.639E+05	3.422E+05
GRAND TOTAL	9.789E+03	1.321E+04	6.109E+03	6.547E+05	5.899E+05	1.115E+06	9.986E+03	1.307E+04	6.109E+03	6.526E+05	5.887E+05	1.120E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (21)

	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	7	1	5	1	5	1
X MAXIMUM	-3.188E+03	5.579E+03	-1.389E+03	1.578E+05	1.452E+05	8.368E+05
Y	4	4	5	4	4	4
Y MAXIMUM	-7.888E+03	-9.165E+03	-1.625E+03	1.948E+05	-4.412E+05	4.794E+05
Z	3	2	6	2	6	2
Z MAXIMUM	1.278E+03	-3.601E+03	5.537E+03	-5.770E+05	-1.529E+05	3.497E+05
GRAND TOTAL	1.018E+04	1.291E+04	6.109E+03	6.504E+05	5.879E+05	1.125E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (22)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(C)	VY(C)	VZ(C)	TX(C)	MY(C)	MZ(C)
X	7	1	5	1	5	1	7	1	5	1	5	1
X MAXIMUM	-3.184E+03	5.578E+03	-1.479E+03	1.604E+05	1.504E+05	8.335E+05	-3.193E+03	5.647E+03	-1.479E+03	1.640E+05	1.467E+05	8.144E+05
Y	4	4	5	4	4	4	4	4	5	4	4	4
Y MAXIMUM	-8.156E+03	-8.674E+03	-1.730E+03	1.809E+05	-4.282E+05	4.964E+05	-8.478E+03	-8.360E+03	-1.730E+03	1.646E+05	-4.353E+05	5.253E+05
Z	3	2	6	2	6	2	3	2	6	2	6	2
Z MAXIMUM	1.340E+03	-3.582E+03	5.906E+03	-5.797E+05	-1.496E+05	3.529E+05	1.415E+03	-3.565E+03	5.906E+03	-5.819E+05	-1.300E+05	3.650E+05
GRAND TOTAL	1.043E+04	1.242E+04	6.474E+03	6.473E+05	5.864E+05	1.128E+06	1.074E+04	1.215E+04	6.474E+03	6.434E+05	5.844E+05	1.136E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (22)

	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	7	1	5	1	5	1
X MAXIMUM	-3.198E+03	5.708E+03	-1.479E+03	1.673E+05	1.428E+05	7.951E+05
Y	4	4	5	4	4	4
Y MAXIMUM	-8.787E+03	-8.034E+03	-1.730E+03	1.480E+05	-4.418E+05	5.531E+05
Z	3	2	6	2	6	2
Z MAXIMUM	1.487E+03	-3.542E+03	5.906E+03	-5.832E+05	-1.103E+05	3.771E+05
GRAND TOTAL	1.104E+04	1.188E+04	6.474E+03	6.393E+05	5.833E+05	1.144E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (23)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(C)	VY(C)	VZ(C)	TX(C)	MY(C)	MZ(C)
X	7	1	1	1	1	1	7	1	1	1	1	1
X MAXIMUM	-3.172E+03	4.631E+03	3.342E+03	1.762E+05	-3.804E+05	7.014E+05	-3.172E+03	4.640E+03	3.342E+03	1.736E+05	-3.796E+05	6.985E+05
Y	4	4	4	4	4	3	4	4	4	4	4	3
Y MAXIMUM	-9.086E+03	-6.157E+03	-4.209E+03	1.327E+05	-6.807E+05	3.976E+05	-9.128E+03	-6.095E+03	-4.209E+03	1.280E+05	-6.841E+05	4.001E+05
Z	3	6	6	2	2	2	3	6	6	2	2	2
Z MAXIMUM	1.560E+03	-3.945E+03	4.744E+03	-5.811E+05	-2.126E+05	3.162E+05	1.571E+03	-3.948E+03	4.744E+03	-5.826E+05	-2.097E+05	3.180E+05
GRAND TOTAL	1.134E+04	1.031E+04	8.247E+03	6.341E+05	8.447E+05	9.711E+05	1.138E+04	1.026E+04	8.247E+03	6.336E+05	8.457E+05	9.715E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (23)

	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	7	1	1	1	1	1
X MAXIMUM	-3.172E+03	4.648E+03	3.342E+03	1.710E+05	-3.787E+05	6.956E+05
Y	4	4	4	4	4	3
Y MAXIMUM	-9.170E+03	-6.032E+03	-4.209E+03	1.233E+05	-6.876E+05	4.026E+05
Z	3	6	6	2	2	2
Z MAXIMUM	1.582E+03	-3.951E+03	4.744E+03	-5.840E+05	-2.069E+05	3.199E+05
GRAND TOTAL	1.142E+04	1.032E+04	8.247E+03	6.332E+05	8.466E+05	9.719E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (24)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(C)	VY(C)	VZ(C)	TX(C)	MY(C)	MZ(C)
X MAXIMUM	-3.145E+03 ⁷	5.704E+03 ¹	-1.601E+03 ⁵	1.759E+05 ¹	1.480E+05 ⁵	7.825E+05 ¹	-3.136E+03 ⁷	5.732E+03 ¹	-1.601E+03 ⁵	1.791E+05 ¹	1.444E+05 ⁵	7.682E+05 ¹
Y MAXIMUM	-9.309E+03 ⁴	-6.974E+03 ⁴	-1.873E+03 ⁵	1.148E+05 ⁴	-4.215E+05 ⁴	5.852E+05 ⁴	-9.499E+03 ⁴	-6.711E+03 ⁴	-1.873E+03 ⁵	1.030E+05 ⁴	-4.236E+05 ⁴	6.024E+05 ⁴
Z MAXIMUM	1.618E+03 ³	-3.467E+03 ²	6.348E+03 ⁶	-5.821E+05 ²	-1.090E+05 ³	3.814E+05 ²	1.665E+03 ³	-3.439E+03 ²	6.348E+03 ⁶	-5.807E+05 ²	-1.106E+05 ³	3.901E+05 ²
GRAND TOTAL	1.156E+04	1.091E+04	6.987E+03	6.301E+05	5.872E+05	1.149E+06	1.176E+04	1.069E+04	6.987E+03	6.266E+05	5.865E+05	1.154E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (24)

	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X MAXIMUM	-3.121E+03 ⁷	5.755E+03 ¹	-1.401E+03 ⁵	1.820E+05 ¹	1.406E+05 ⁵	7.538E+05 ¹
Y MAXIMUM	-9.683E+03 ⁴	-6.444E+03 ⁴	-1.873E+03 ⁵	1.19E+04 ⁴	-4.253E+05 ⁴	6.189E+05 ⁴
Z MAXIMUM	1.711E+03 ³	-3.409E+03 ²	6.348E+03 ⁶	-5.788E+05 ²	-1.121E+05 ³	3.987E+05 ²
GRAND TOTAL	1.195E+04	1.048E+04	6.987E+03	6.230E+05	5.864E+05	1.159E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (25)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(C)	VY(C)	VZ(C)	TX(C)	MY(C)	MZ(C)
X MAXIMUM	-3.040E+03 ⁷	5.658E+03 ¹	-1.808E+03 ⁵	1.801E+05 ¹	1.316E+05 ⁵	7.607E+05 ¹	-2.997E+03 ⁷	5.682E+03 ¹	-1.808E+03 ⁵	1.816E+05 ¹	1.230E+05 ⁵	7.338E+05 ¹
Y MAXIMUM	-9.789E+03 ⁴	-5.772E+03 ⁴	-2.116E+03 ⁵	7.217E+04 ⁴	-4.798E+05 ⁴	5.804E+05 ⁴	-1.008E+04 ⁴	-5.248E+03 ⁴	-2.116E+03 ⁵	4.677E+04 ⁴	-4.830E+05 ⁴	6.066E+05 ⁴
Z MAXIMUM	1.752E+03 ³	-3.378E+03 ²	6.721E+03 ⁶	-5.787E+05 ²	-1.010E+05 ³	4.014E+05 ²	1.830E+03 ³	-3.308E+03 ²	6.721E+03 ⁶	-5.746E+05 ²	-1.026E+05 ³	4.172E+05 ²
GRAND TOTAL	1.204E+04	9.923E+03	7.398E+03	6.191E+05	5.998E+05	1.154E+06	1.236E+04	9.525E+03	7.398E+03	6.124E+05	6.001E+05	1.161E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (25)

	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X MAXIMUM	-2.945E+03 ⁷	5.690E+03 ¹	-1.808E+03 ⁵	1.827E+05 ¹	1.141E+05 ⁵	7.068E+05 ¹
Y MAXIMUM	-1.034E+04 ⁴	-4.709E+03 ⁴	-2.116E+03 ⁵	-4.493E+04 ⁴	-4.850E+05 ⁴	6.302E+05 ⁴
Z MAXIMUM	1.904E+03 ³	-3.228E+03 ²	6.721E+03 ⁶	-5.689E+05 ²	1.222E+05 ³	4.328E+05 ²
GRAND TOTAL	1.266E+04	9.128E+03	7.398E+03	6.055E+05	6.026E+05	1.167E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (26)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(C)	VY(C)	VZ(C)	TX(C)	MY(C)	MZ(C)
X MAXIMUM	-2.781E+03 ⁷	5.494E+03 ¹	-1.884E+03 ⁵	1.943E+05 ¹	1.006E+05 ⁵	7.004E+05 ¹	-2.742E+03 ⁷	5.482E+03 ¹	-1.884E+03 ⁵	1.924E+05 ¹	9.529E+04 ⁵	6.867E+05 ¹
Y MAXIMUM	-1.046E+04 ⁴	-3.680E+03 ⁴	-2.204E+03 ⁵	-4.779E+04 ⁴	-5.492E+05 ⁴	5.755E+05 ⁴	-1.056E+04 ⁴	-3.388E+03 ⁴	-2.204E+03 ⁵	-4.730E+04 ⁴	-5.492E+05 ⁴	5.843E+05 ⁴
Z MAXIMUM	1.962E+03 ³	-3.085E+03 ²	6.991E+03 ⁶	-5.527E+05 ²	1.125E+05 ³	4.558E+05 ²	1.994E+03 ³	-3.033E+03 ²	6.991E+03 ⁶	-5.494E+05 ²	1.267E+05 ³	4.635E+05 ²
GRAND TOTAL	1.280E+04	8.437E+03	7.756E+03	5.941E+05	6.356E+05	1.156E+06	1.292E+04	8.257E+03	7.756E+03	5.908E+05	6.363E+05	1.157E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (26)

	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X MAXIMUM	-2.701E+03 ⁷	5.467E+03 ¹	-1.884E+03 ⁵	1.903E+05 ¹	8.993E+04 ⁵	6.730E+05 ¹
Y MAXIMUM	-1.065E+04 ⁴	-3.092E+03 ⁴	-2.204E+03 ⁵	-4.680E+04 ⁴	-5.488E+05 ⁴	5.925E+05 ⁴
Z MAXIMUM	2.025E+03 ³	-2.979E+03 ²	6.991E+03 ⁶	-5.457E+05 ²	1.409E+05 ³	4.710E+05 ²
GRAND TOTAL	1.303E+04	8.082E+03	7.756E+03	5.877E+05	6.375E+05	1.158E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (27)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(C)	VY(C)	VZ(C)	TX(C)	MY(C)	MZ(C)
X	7	1	5	1	5	1	7	1	5	1	5	1
X MAXIMUM	-2.548E+03	5.394E+03	-2.095E+03	1.899E+05	1.069E+05	6.769E+05	-2.439E+03	5.339E+03	-2.095E+03	1.909E+05	9.382E+04	6.480E+05
Y	4	4	5	4	4	4	4	3	5	4	4	4
Y MAXIMUM	-1.053E+04	-2.360E+03	-2.451E+03	-4.798E+04	-4.497E+05	6.698E+05	-1.065E+04	-1.985E+03	-2.451E+03	-7.474E+04	-4.433E+05	6.808E+05
Z	2	2	6	2	2	2	2	2	6	2	2	2
Z MAXIMUM	-2.070E+03	-2.946E+03	7.533E+03	-5.394E+05	2.293E+05	4.427E+05	-2.243E+03	-2.817E+03	7.533E+03	-5.247E+05	2.610E+05	4.582E+05
GRAND TOTAL	1.289E+04	7.540E+03	8.342E+03	5.834E+05	6.145E+05	1.172E+06	1.307E+04	7.232E+03	8.342E+03	5.749E+05	6.209E+05	1.170E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (27)

	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	7	1	5	1	5	1
X MAXIMUM	-2.322E+03	5.266E+03	-2.095E+03	1.913E+05	8.037E+04	6.194E+05
Y	4	3	5	4	4	4
Y MAXIMUM	-1.073E+04	-1.675E+03	-2.451E+03	-1.011E+05	-4.353E+05	6.884E+05
Z	2	2	6	2	2	2
Z MAXIMUM	-2.408E+03	-2.677E+03	7.533E+03	-5.081E+05	2.918E+05	4.731E+05
GRAND TOTAL	1.321E+04	6.971E+03	8.342E+03	5.664E+05	6.303E+05	1.166E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (28)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(C)	VY(C)	VZ(C)	TX(C)	MY(C)	MZ(C)
X	7	1	5	1	1	1	5	1	5	1	1	1
X MAXIMUM	-2.044E+03	4.841E+03	-2.370E+03	1.828E+05	1.670E+05	5.991E+05	-2.024E+03	4.821E+03	-2.370E+03	1.846E+05	1.635E+05	5.942E+05
Y	4	1	5	4	3	4	4	1	5	4	3	4
Y MAXIMUM	-1.056E+04	-1.190E+03	-2.773E+03	-1.462E+05	3.750E+05	7.809E+05	-1.055E+04	-1.186E+03	-2.773E+03	-1.485E+05	3.748E+05	7.806E+05
Z	2	2	6	2	2	2	2	2	6	2	2	2
Z MAXIMUM	-2.623E+03	-2.392E+03	7.567E+03	-4.876E+05	4.555E+05	3.490E+05	-2.650E+03	-2.363E+03	7.567E+03	-4.825E+05	4.617E+05	3.514E+05
GRAND TOTAL	1.306E+04	6.581E+03	8.743E+03	5.586E+05	7.056E+05	1.126E+06	1.307E+04	6.559E+03	8.743E+03	5.563E+05	7.085E+05	1.124E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (28)

	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	5	1	5	1	1	1
X MAXIMUM	-2.022E+03	4.800E+03	-2.370E+03	1.865E+05	1.600E+05	5.893E+05
Y	4	1	5	4	3	4
Y MAXIMUM	-1.055E+04	-1.180E+03	-2.773E+03	-1.508E+05	3.745E+05	7.802E+05
Z	2	2	6	2	2	2
Z MAXIMUM	-2.677E+03	-2.332E+03	7.567E+03	-4.772E+05	4.677E+05	3.538E+05
GRAND TOTAL	1.308E+04	6.540E+03	8.743E+03	5.540E+05	7.116E+05	1.122E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (29)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(C)	VY(C)	VZ(C)	TX(C)	MY(C)	MZ(C)
X	5	1	5	1	1	1	5	1	5	1	1	1
X MAXIMUM	-2.020E+03	4.882E+03	-2.068E+03	1.904E+05	-1.124E+05	5.990E+05	-2.006E+03	4.860E+03	-2.068E+03	1.891E+05	-1.137E+05	5.940E+05
Y	4	5	5	4	4	4	4	5	5	4	4	4
Y MAXIMUM	-1.047E+04	1.424E+03	-2.420E+03	-1.471E+05	-5.210E+05	6.157E+05	-1.046E+04	1.451E+03	-2.420E+03	-1.530E+05	-5.186E+05	6.153E+05
Z	2	2	6	2	2	2	2	2	6	2	2	2
Z MAXIMUM	-2.681E+03	-2.366E+03	7.795E+03	-4.736E+05	2.675E+05	5.252E+05	-2.708E+03	-2.335E+03	7.795E+03	-4.705E+05	2.724E+05	5.276E+05
GRAND TOTAL	1.300E+04	6.775E+03	8.643E+03	5.520E+05	6.560E+05	1.156E+06	1.300E+04	6.764E+03	8.643E+03	5.510E+05	6.569E+05	1.154E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (29)

	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	5	1	5	1	1	1
X MAXIMUM	-1.991E+03	4.838E+03	-2.068E+03	1.878E+05	-1.150E+05	5.890E+05
Y	4	5	5	4	4	4
Y MAXIMUM	-1.046E+04	1.478E+03	-2.420E+03	-1.589E+05	-5.161E+05	6.148E+05
Z	2	2	6	2	2	2
Z MAXIMUM	-2.735E+03	-2.304E+03	7.795E+03	-4.674E+05	2.773E+05	5.300E+05
GRAND TOTAL	1.301E+04	6.756E+03	8.643E+03	5.502E+05	6.580E+05	1.152E+06

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ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (30)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(C)	VY(C)	VZ(C)	TX(C)	MY(C)	MZ(C)
X MAXIMUM	1.879E+03 ¹	4.653E+03 ¹	-2.432E+03 ⁵	1.873E+05 ¹	6.380E+04 ⁵	5.994E+05 ¹	2.507E+03 ¹	4.347E+03 ¹	-2.432E+03 ⁵	1.811E+05 ¹	-5.606E+04 ¹	5.429E+05 ¹
Y MAXIMUM	-9.906E+03 ⁴	1.412E+03 ⁴	-2.845E+03 ⁵	-1.678E+05 ⁴	-4.175E+05 ⁴	6.834E+05 ⁴	-9.614E+03 ⁴	2.774E+03 ⁴	-2.845E+03 ⁵	-2.234E+05 ⁴	-3.803E+05 ⁴	6.572E+05 ⁴
Z MAXIMUM	-2.784E+03 ²	-2.294E+03 ²	8.535E+03 ⁶	-4.595E+05 ²	3.616E+05 ²	4.841E+05 ²	-3.076E+03 ²	-1.886E+03 ²	8.535E+03 ⁶	-4.050E+05 ²	4.193E+05 ²	5.103E+05 ²
GRAND TOTAL	1.239E+04	6.522E+03	9.511E+03	5.475E+05	6.503E+05	1.158E+06	1.225E+04	6.779E+03	9.511E+03	5.335E+05	6.830E+05	1.120E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (30)

	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X MAXIMUM	3.086E+03 ¹	3.957E+03 ¹	-2.432E+03 ⁵	1.717E+05 ¹	-7.898E+04 ¹	4.908E+05 ¹
Y MAXIMUM	-9.136E+03 ⁴	4.082E+03 ⁴	-2.845E+03 ⁵	-2.734E+05 ⁴	-3.357E+05 ⁴	6.141E+05 ⁴
Z MAXIMUM	-3.308E+03 ²	-1.440E+03 ²	8.535E+03 ⁶	-3.431E+05 ²	4.689E+05 ²	5.312E+05 ²
GRAND TOTAL	1.195E+04	7.306E+03	9.511E+03	5.260E+05	7.289E+05	1.072E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (31)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(C)	VY(C)	VZ(C)	TX(C)	MY(C)	MZ(C)
X MAXIMUM	3.350E+03 ¹	3.103E+03 ¹	-2.649E+03 ⁵	1.516E+05 ¹	-9.153E+04 ¹	4.952E+05 ¹	3.572E+03 ¹	2.892E+03 ⁷	-2.649E+03 ⁵	1.443E+05 ¹	-1.023E+05 ¹	4.752E+05 ¹
Y MAXIMUM	-7.236E+03 ⁴	6.057E+03 ⁴	-3.099E+03 ⁵	-3.329E+05 ⁴	-2.610E+05 ⁴	6.210E+05 ⁴	-6.764E+03 ⁴	6.580E+03 ⁴	-3.099E+03 ⁵	-3.513E+05 ⁴	-2.316E+05 ⁴	5.785E+05 ⁴
Z MAXIMUM	-3.518E+03 ²	-8.654E+02 ²	9.264E+03 ⁶	-2.580E+05 ²	5.400E+05 ²	5.115E+05 ²	-3.573E+03 ²	-8.879E+02 ³	9.264E+03 ⁶	-2.171E+05 ²	5.560E+05 ²	5.164E+05 ²
GRAND TOTAL	1.022E+04	8.347E+03	1.033E+04	5.316E+05	7.350E+05	1.065E+06	9.885E+03	8.742E+03	1.033E+04	5.374E+05	7.610E+05	1.025E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (31)

	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X MAXIMUM	3.775E+03 ¹	2.870E+03 ⁷	-2.649E+03 ⁵	1.363E+05 ¹	-1.125E+05 ¹	4.570E+05 ¹
Y MAXIMUM	-6.254E+03 ⁴	7.066E+03 ⁴	-3.099E+03 ⁵	-3.675E+05 ⁴	-2.009E+05 ⁴	5.326E+05 ⁴
Z MAXIMUM	-3.608E+03 ²	-1.018E+03 ³	9.264E+03 ⁶	2.017E+05 ⁶	5.689E+05 ²	5.195E+05 ²
GRAND TOTAL	9.525E+03	9.133E+03	1.033E+04	5.471E+05	7.887E+05	9.838E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (32)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X MAXIMUM	3.837E+03 ¹	-1.131E+03 ⁷	2.582E+03 ⁷	1.245E+05 ¹	-4.723E+05 ¹	8.794E+04 ²	3.837E+03 ¹	-1.131E+03 ⁷	2.582E+03 ⁷	1.245E+05 ¹	-4.647E+05 ¹	8.526E+04 ²
Y MAXIMUM	-4.783E+03 ⁴	-4.132E+03 ⁴	7.679E+03 ⁴	-3.855E+05 ⁴	-5.538E+05 ⁴	2.207E+05 ³	-4.783E+03 ⁴	-4.132E+03 ⁴	7.679E+03 ⁴	-3.855E+05 ⁴	-5.254E+05 ⁴	2.139E+05 ³
Z MAXIMUM	-3.888E+03 ²	6.748E+03 ⁶	1.684E+03 ⁶	2.437E+05 ⁶	-4.022E+05 ²	6.699E+05 ²	-3.888E+03 ²	6.748E+03 ⁶	1.684E+03 ⁶	2.437E+05 ⁶	-4.023E+05 ²	6.494E+05 ²
GRAND TOTAL	8.550E+03	1.013E+04	9.458E+03	5.655E+05	9.262E+05	8.436E+05	8.550E+03	1.013E+04	9.458E+03	5.655E+05	8.999E+05	8.117E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (33)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X MAXIMUM	3.679E+03 ¹	-1.084E+03 ⁷	2.482E+03 ⁷	1.195E+05 ¹	-4.660E+05 ¹	8.526E+04 ²	3.679E+03 ¹	-1.084E+03 ⁷	2.482E+03 ⁷	1.195E+05 ¹	-4.464E+05 ¹	7.811E+04 ²
Y MAXIMUM	-4.440E+03 ⁴	-5.032E+03 ⁴	7.718E+03 ⁴	-3.911E+05 ⁴	-5.212E+05 ⁴	2.139E+05 ³	-4.440E+03 ⁴	-5.032E+03 ⁴	7.718E+03 ⁴	-3.911E+05 ⁴	-4.455E+05 ⁴	1.957E+05 ³
Z MAXIMUM	-3.834E+03 ²	6.510E+03 ⁶	1.719E+03 ⁶	2.434E+05 ⁶	-4.010E+05 ²	6.494E+05 ²	-3.834E+03 ²	6.510E+03 ⁶	1.719E+03 ⁶	2.434E+05 ⁶	-4.014E+05 ²	5.949E+05 ²
GRAND TOTAL	8.179E+03	9.945E+03	9.436E+03	5.671E+05	8.989E+05	8.117E+05	8.179E+03	9.945E+03	9.436E+03	5.671E+05	8.327E+05	7.305E+05

3C-V

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (34)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	1	7	7	1	1	2	1	7	7	1	1	5
X MAXIMUM	3.352E+03	-9.498E+02	2.242E+03	1.224E+05	-4.457E+05	7.811E+04	3.352E+03	-9.498E+02	2.242E+03	1.224E+05	-4.122E+05	-8.296E+04
Y	4	4	4	4	4	3	4	4	4	4	4	3
Y MAXIMUM	-3.606E+03	-3.889E+03	7.787E+03	-3.883E+05	-4.479E+05	1.957E+05	-3.606E+03	-3.889E+03	7.787E+03	-3.883E+05	-3.043E+05	1.624E+05
Z	2	6	6	6	2	2	2	6	6	6	2	2
Z MAXIMUM	-3.881E+03	5.998E+03	1.771E+03	2.435E+05	-4.022E+05	5.949E+05	-3.881E+03	5.998E+03	1.771E+03	2.435E+05	-4.034E+05	4.940E+05
GRAND TOTAL	7.496E+03	9.453E+03	9.370E+03	5.663E+05	8.332E+05	7.305E+05	7.496E+03	9.453E+03	9.370E+03	5.663E+05	7.248E+05	5.960E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (35)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	1	7	7	1	1	5	1	7	7	1	1	5
X MAXIMUM	3.000E+03	-7.955E+02	1.925E+03	1.215E+05	-4.124E+05	-8.296E+04	3.000E+03	-7.955E+02	1.925E+03	1.215E+05	-3.938E+05	-9.175E+04
Y	3	4	4	4	4	3	3	4	4	4	4	3
Y MAXIMUM	-3.134E+03	-3.571E+03	7.826E+03	-3.889E+05	-3.035E+05	1.624E+05	-3.134E+03	-3.571E+03	7.826E+03	-3.889E+05	-2.099E+05	1.420E+05
Z	2	6	6	6	2	2	2	6	6	6	2	2
Z MAXIMUM	-3.884E+03	5.405E+03	1.779E+03	2.435E+05	-4.032E+05	4.940E+05	-3.884E+03	5.405E+03	1.779E+03	2.435E+05	-4.042E+05	4.302E+05
GRAND TOTAL	6.823E+03	8.801E+03	9.253E+03	5.664E+05	7.247E+05	5.960E+05	6.823E+03	8.801E+03	9.253E+03	5.664E+05	6.698E+05	5.241E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (36)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	1	7	7	1	1	5	1	7	7	1	1	5
X MAXIMUM	2.841E+03	-7.131E+02	1.767E+03	1.231E+05	-3.933E+05	-9.175E+04	2.841E+03	-7.131E+02	1.767E+03	1.231E+05	-3.907E+05	-9.302E+04
Y	3	4	4	4	4	3	3	4	4	4	4	3
Y MAXIMUM	-3.011E+03	-3.402E+03	7.832E+03	-3.881E+05	-2.115E+05	1.420E+05	-3.011E+03	-3.402E+03	7.832E+03	-3.881E+05	-2.019E+05	1.390E+05
Z	2	2	6	6	2	2	2	2	6	6	2	2
Z MAXIMUM	-3.911E+03	5.241E+03	1.769E+03	2.434E+05	-4.047E+05	4.302E+05	-3.911E+03	5.241E+03	1.769E+03	2.434E+05	-4.049E+05	4.207E+05
GRAND TOTAL	6.565E+03	8.455E+03	9.190E+03	5.662E+05	6.700E+05	5.241E+05	6.565E+03	8.455E+03	9.190E+03	5.662E+05	6.629E+05	5.144E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (37)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	1	2	7	1	1	5	1	2	7	1	1	5
X MAXIMUM	2.581E+03	6.706E+02	1.507E+03	1.221E+05	-3.910E+05	-9.302E+04	2.581E+03	6.706E+02	1.507E+03	1.221E+05	-3.660E+05	-1.061E+05
Y	3	4	4	4	3	3	3	4	4	4	4	4
Y MAXIMUM	-2.796E+03	-3.097E+03	7.838E+03	-3.886E+05	-2.025E+05	1.390E+05	-2.796E+03	-3.097E+03	7.838E+03	-3.886E+05	-1.413E+05	1.777E+05
Z	2	2	6	6	2	2	2	2	6	6	2	2
Z MAXIMUM	-3.908E+03	5.108E+03	1.750E+03	2.435E+05	-4.046E+05	4.207E+05	-3.908E+03	5.108E+03	1.750E+03	2.435E+05	-4.070E+05	3.155E+05
GRAND TOTAL	6.175E+03	7.909E+03	9.101E+03	5.664E+05	6.628E+05	5.144E+05	6.175E+03	7.909E+03	9.101E+03	5.664E+05	6.106E+05	4.276E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (38)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	1	2	5	1	1	5	1	2	5	1	1	5
X MAXIMUM	2.104E+03	6.202E+02	1.010E+03	1.223E+05	-3.659E+05	-1.061E+05	2.104E+03	6.202E+02	1.010E+03	1.223E+05	-3.512E+05	-1.154E+05
Y	3	4	4	4	3	4	3	4	4	4	4	4
Y MAXIMUM	-2.408E+03	-2.359E+03	7.780E+03	-3.886E+05	-1.412E+05	1.777E+05	-2.408E+03	-2.359E+03	7.780E+03	-3.886E+05	1.249E+05	2.262E+05
Z	2	2	6	6	2	2	2	2	6	6	2	2
Z MAXIMUM	-3.928E+03	4.724E+03	1.650E+03	2.434E+05	-4.071E+05	3.155E+05	-3.928E+03	4.724E+03	1.650E+03	2.434E+05	-4.104E+05	2.183E+05
GRAND TOTAL	5.690E+03	6.692E+03	8.897E+03	5.664E+05	6.106E+05	4.276E+05	5.690E+03	6.692E+03	8.897E+03	5.664E+05	6.151E+05	3.829E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (39)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	7	2	5	1	1	5	7	2	5	1	1	5
X MAXIMUM	2.112E+03	5.678E+02	9.555E+02	1.345E+05	-3.467E+05	-1.154E+05	2.112E+03	5.678E+02	9.555E+02	1.345E+05	-3.464E+05	-1.157E+05
Y	3	4	4	4	4	4	3	4	4	4	4	4
Y MAXIMUM	-2.242E+03	-1.879E+03	7.713E+03	-3.927E+05	1.113E+05	2.262E+05	-2.242E+03	-1.879E+03	7.713E+03	-3.927E+05	1.171E+05	2.276E+05
Z	2	2	6	6	2	2	2	2	6	6	2	2
Z MAXIMUM	-4.091E+03	4.325E+03	1.571E+03	2.394E+05	-4.143E+05	2.183E+05	-4.091E+03	4.325E+03	1.571E+03	2.394E+05	-4.144E+05	2.150E+05
GRAND TOTAL	5.683E+03	5.862E+03	8.776E+03	5.689E+05	6.129E+05	3.829E+05	5.683E+03	5.862E+03	8.776E+03	5.689E+05	6.140E+05	3.820E+05

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ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (40)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	7	2	5	1	1	5	7	2	5	1	1	5
X MAXIMUM	2.189E+03	5.664E+02	9.254E+02	1.230E+05	-3.507E+05	-1.157E+05	2.189E+03	5.664E+02	9.254E+02	1.230E+05	-3.480E+05	-1.184E+05
Y	3	4	4	4	4	4	3	4	4	4	4	4
Y MAXIMUM	-2.098E+03	-1.620E+03	7.676E+03	-3.886E+05	1.300E+05	2.276E+05	-2.098E+03	-1.620E+03	7.676E+03	-3.886E+05	2.139E+05	2.453E+05
Z	2	2	6	6	2	2	2	2	6	6	2	2
Z MAXIMUM	-3.950E+03	4.314E+03	1.527E+03	2.433E+05	-4.107E+05	2.150E+05	-3.950E+03	4.314E+03	1.527E+03	2.433E+05	-4.128E+05	1.679E+05
GRAND TOTAL	5.546E+03	5.588E+03	8.720E+03	5.664E+05	6.163E+05	3.820E+05	5.546E+03	5.588E+03	8.720E+03	5.664E+05	6.421E+05	3.713E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (41)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(C)	VY(C)	VZ(C)	TX(C)	MY(C)	MZ(C)
X	7	5	2	1	5	1	7	5	2	1	5	1
X MAXIMUM	2.379E+03	8.514E+02	-5.156E+02	1.227E+05	-1.203E+05	3.487E+05	2.388E+03	8.057E+02	-5.156E+02	1.215E+05	-1.243E+05	3.507E+05
Y	3	4	3	4	4	4	4	4	3	4	4	4
Y MAXIMUM	-1.840E+03	7.594E+03	-7.325E+02	-3.884E+05	2.373E+05	-2.231E+05	1.890E+03	7.453E+03	-7.325E+02	-3.650E+05	2.771E+05	-2.847E+05
Z	2	6	2	6	2	2	2	3	2	6	2	2
Z MAXIMUM	-3.958E+03	1.334E+03	-3.927E+03	2.434E+05	1.829E+05	4.063E+05	-3.976E+03	-1.265E+03	-3.927E+03	2.362E+05	1.608E+05	4.079E+05
GRAND TOTAL	5.597E+03	8.598E+03	4.685E+03	5.663E+05	3.746E+05	6.403E+05	5.733E+03	8.508E+03	4.685E+03	5.446E+05	3.975E+05	6.688E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (41)

	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	7	5	2	1	5	1
X MAXIMUM	2.376E+03	7.534E+02	-5.156E+02	1.194E+05	-1.271E+05	3.537E+05
Y	4	4	3	4	4	4
Y MAXIMUM	2.559E+03	7.251E+03	-7.325E+02	-3.381E+05	3.145E+05	-3.449E+05
Z	2	3	2	6	2	2
Z MAXIMUM	-3.961E+03	-1.318E+03	-3.927E+03	2.255E+05	1.374E+05	4.066E+05
GRAND TOTAL	5.921E+03	8.379E+03	4.685E+03	5.191E+05	4.271E+05	7.004E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (42)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(C)	VY(C)	VZ(C)	TX(C)	MY(C)	MZ(C)
X	7	1	2	1	5	1	7	7	2	1	5	1
X MAXIMUM	2.425E+03	-1.013E+03	-4.483E+02	1.154E+05	-1.289E+05	3.540E+05	2.336E+03	-1.253E+03	-4.483E+02	1.118E+05	-1.275E+05	3.620E+05
Y	4	4	3	4	4	4	4	4	3	4	4	4
Y MAXIMUM	4.217E+03	6.432E+03	-3.543E+02	-2.983E+05	3.497E+05	-3.477E+05	4.748E+03	6.050E+03	-3.543E+02	-2.676E+05	3.719E+05	-3.955E+05
Z	2	3	2	6	6	2	2	3	2	6	6	2
Z MAXIMUM	-3.914E+03	-1.332E+03	-3.415E+03	2.075E+05	-1.637E+05	4.053E+05	-3.835E+03	-1.347E+03	-3.415E+03	1.925E+05	-1.899E+05	3.982E+05
GRAND TOTAL	6.701E+03	7.780E+03	3.793E+03	4.807E+05	4.693E+05	7.008E+05	6.972E+03	7.537E+03	3.793E+03	4.512E+05	4.909E+05	7.271E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (42)

	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	7	7	2	1	5	1
X MAXIMUM	2.229E+03	-1.347E+03	-4.483E+02	1.074E+05	-1.252E+05	3.704E+05
Y	4	4	3	3	4	4
Y MAXIMUM	5.245E+03	5.625E+03	-3.543E+02	2.507E+05	3.913E+05	-4.403E+05
Z	2	2	2	6	6	2
Z MAXIMUM	-3.728E+03	1.415E+03	-3.415E+03	1.753E+05	-2.146E+05	3.886E+05
GRAND TOTAL	7.242E+03	7.279E+03	3.793E+03	4.202E+05	5.129E+05	7.534E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (43)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(C)	VY(C)	VZ(C)	TX(C)	MY(C)	MZ(C)
X	7	7	7	1	5	1	7	7	7	1	5	1
X MAXIMUM	2.036E+03	-2.085E+03	-4.448E+02	1.008E+05	-1.220E+05	3.701E+05	1.734E+03	-2.343E+03	-4.448E+02	9.081E+04	-1.109E+05	3.894E+05
Y	4	4	4	3	4	4	4	4	4	3	4	4
Y MAXIMUM	6.649E+03	4.117E+03	-1.366E+03	2.418E+05	4.169E+05	-4.387E+05	7.147E+03	3.175E+03	-1.366E+03	2.270E+05	4.221E+05	-4.835E+05
Z	2	2	2	6	6	2	2	2	2	6	6	2
Z MAXIMUM	-3.581E+03	1.808E+03	-2.663E+03	1.500E+05	-2.324E+05	3.891E+05	-3.302E+03	2.278E+03	-2.663E+03	1.170E+05	-2.506E+05	3.640E+05
GRAND TOTAL	8.306E+03	6.406E+03	3.265E+03	3.780E+05	5.455E+05	7.528E+05	8.606E+03	5.997E+03	3.265E+03	3.282E+05	5.542E+05	7.773E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (43)

	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	7	7	7	1	5	1
X MAXIMUM	1.400E+03	-2.557E+03	-4.448E+02	7.956E+04	-9.777E+04	4.077E+05
Y	4	3	4	3	4	4
Y MAXIMUM	7.512E+03	2.803E+03	-1.366E+03	2.085E+05	4.195E+05	-5.163E+05
Z	2	2	2	3	6	2
Z MAXIMUM	-2.962E+03	2.706E+03	-2.663E+03	-8.472E+04	-2.641E+05	3.333E+05
GRAND TOTAL	8.817E+03	5.683E+03	3.265E+03	2.842E+05	5.576E+05	7.957E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (44)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(C)	VY(C)	VZ(C)	TX(C)	MY(C)	MZ(C)
X	1	7	5	5	1	1	1	7	5	5	1	1
X MAXIMUM	-2.215E+03	-3.179E+03	7.630E+02	-7.976E+04	-9.787E+04	4.081E+05	-2.428E+03	-3.244E+03	7.630E+02	-9.169E+04	-1.034E+05	4.273E+05
Y	4	3	4	3	4	4	4	4	4	3	4	4
Y MAXIMUM	8.221E+03	2.040E+03	-2.812E+03	1.791E+05	4.241E+05	-5.180E+05	7.983E+03	-3.115E+03	-2.812E+03	1.479E+05	3.774E+05	-4.966E+05
Z	2	2	6	6	6	2	2	6	6	3	6	2
Z MAXIMUM	-2.509E+03	3.140E+03	1.486E+03	-7.278E+04	-2.749E+05	3.331E+05	-1.964E+03	3.506E+03	1.486E+03	-6.009E+04	-2.551E+05	2.841E+05
GRAND TOTAL	9.627E+03	5.581E+03	3.996E+03	2.436E+05	5.753E+05	7.965E+05	9.367E+03	6.007E+03	3.996E+03	2.318E+05	5.271E+05	7.700E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (44)

	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	1	7	5	5	1	1
X MAXIMUM	-2.576E+03	-3.223E+03	7.630E+02	-9.934E+04	-1.062E+05	4.406E+05
Y	4	4	4	4	4	4
Y MAXIMUM	7.532E+03	-3.387E+03	-2.812E+03	1.221E+05	3.205E+05	-4.560E+05
Z	2	2	6	6	6	2
Z MAXIMUM	-1.367E+03	3.790E+03	1.486E+03	-4.865E+04	-2.284E+05	2.303E+05
GRAND TOTAL	8.948E+03	6.615E+03	3.996E+03	2.430E+05	4.708E+05	7.317E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (45)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	1	7	5	5	1	1	1	7	5	5	1	1
X MAXIMUM	-3.663E+03	3.061E+03	-9.123E+02	-1.040E+05	9.125E+04	-8.449E+05	-3.663E+03	3.061E+03	-9.123E+02	-1.040E+05	8.774E+04	-4.436E+05
Y	4	4	4	4	4	4	4	4	4	4	4	4
Y MAXIMUM	6.307E+03	6.340E+03	3.347E+03	1.862E+05	-2.686E+05	4.677E+05	6.307E+03	6.340E+03	3.347E+03	1.862E+05	-2.209E+05	3.773E+05
Z	3	2	6	6	6	2	3	2	6	6	6	2
Z MAXIMUM	-1.176E+03	-3.941E+03	-2.399E+03	-9.493E+04	2.179E+05	-2.297E+05	-1.176E+03	-3.941E+03	-2.399E+03	-9.493E+04	1.837E+05	-1.735E+05
GRAND TOTAL	8.343E+03	8.536E+03	4.816E+03	2.786E+05	4.411E+05	7.376E+05	8.343E+03	8.536E+03	4.816E+03	2.786E+05	3.813E+05	6.608E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (46)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	1	7	5	5	1	1	1	7	5	5	1	1
X MAXIMUM	-4.403E+03	2.950E+03	-9.334E+02	-1.040E+05	8.774E+04	-4.436E+05	-4.403E+03	2.950E+03	-9.334E+02	-1.040E+05	8.385E+04	-4.400E+05
Y	4	4	4	4	4	4	4	4	4	4	3	4
Y MAXIMUM	6.042E+03	7.323E+03	3.790E+03	1.865E+05	-2.209E+05	3.772E+05	6.042E+03	7.323E+03	3.790E+03	1.865E+05	1.785E+05	2.448E+05
Z	3	2	6	6	6	2	3	2	6	6	6	2
Z MAXIMUM	-1.168E+03	-3.950E+03	-2.866E+03	-9.488E+04	1.837E+05	-1.735E+05	-1.168E+03	-3.950E+03	-2.866E+03	-9.488E+04	1.319E+05	-1.021E+05
GRAND TOTAL	8.534E+03	9.311E+03	5.403E+03	2.788E+05	3.813E+05	6.607E+05	8.534E+03	9.311E+03	5.403E+03	2.788E+05	2.980E+05	5.732E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (47)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	1	7	5	5	1	1	1	7	5	5	1	1
X MAXIMUM	-5.230E+03	2.710E+03	-8.680E+02	-1.040E+05	8.385E+04	-4.400E+05	-5.230E+03	2.710E+03	-8.680E+02	-1.040E+05	8.074E+04	-4.357E+05
Y	4	4	4	4	3	4	4	4	4	4	3	3
Y MAXIMUM	5.742E+03	8.391E+03	4.070E+03	1.865E+05	1.785E+05	2.448E+05	5.742E+03	8.391E+03	4.070E+03	1.865E+05	1.418E+05	1.674E+05
Z	3	2	6	6	6	2	3	2	6	6	6	3
Z MAXIMUM	-1.160E+03	-3.947E+03	-3.136E+03	-9.488E+04	1.319E+05	-1.021E+05	-1.160E+03	-3.947E+03	-3.136E+03	-9.488E+04	7.519E+04	-6.802E+04
GRAND TOTAL	8.840E+03	1.016E+04	5.876E+03	2.788E+05	2.980E+05	5.732E+05	8.840E+03	1.016E+04	5.876E+03	2.788E+05	2.186E+05	5.182E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (48)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(C)	VY(C)	VZ(C)	TX(C)	MY(C)	MZ(C)
X MAXIMUM	-6.199E+03 ¹	-2.319E+03 ⁷	7.539E+02 ⁵	-1.040E+05 ⁵	-5.751E+04 ¹	4.394E+05 ¹	-6.118E+03 ¹	-2.023E+03 ⁷	7.539E+02 ⁵	-9.818E+04 ⁵	-5.663E+04 ¹	4.322E+05 ¹
Y MAXIMUM	5.390E+03 ⁴	-9.802E+03 ⁴	-3.619E+03 ⁴	1.865E+05 ⁴	-1.505E+05 ³	-1.596E+05 ³	4.024E+03 ⁴	-1.044E+04 ⁴	-3.619E+03 ⁴	1.917E+05 ⁴	-1.312E+05 ³	-1.493E+05 ³
Z MAXIMUM	-1.151E+03 ³	4.021E+03 ²	3.240E+03 ⁶	-9.488E+04 ⁶	-7.538E+04 ⁶	6.487E+04 ³	-1.104E+03 ³	4.094E+03 ²	3.240E+03 ⁶	-1.015E+05 ⁶	5.335E+04 ³	6.067E+04 ³
GRAND TOTAL	9.311E+03	1.131E+04	5.899E+03	2.788E+05	2.150E+05	5.198E+05	8.487E+03	1.194E+04	5.899E+03	2.744E+05	1.875E+05	5.093E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (46)

	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X MAXIMUM	-5.927E+03 ¹	1.822E+03 ¹	7.539E+02 ⁵	-8.934E+04 ⁵	7.641E+04 ⁵	4.150E+05 ¹
Y MAXIMUM	2.585E+03 ⁴	-1.088E+04 ⁴	-3.619E+03 ⁴	1.076E+05 ⁴	-1.097E+05 ³	1.553E+05 ⁴
Z MAXIMUM	-1.038E+03 ³	4.092E+03 ²	3.240E+03 ⁶	-1.010E+05 ⁶	5.799E+04 ²	-6.933E+04 ²
GRAND TOTAL	7.741E+03	1.243E+04	5.899E+03	2.608E+05	2.066E+05	5.277E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (49)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(C)	VY(C)	VZ(C)	TX(C)	MY(C)	MZ(C)
X MAXIMUM	-6.565E+03 ¹	3.082E+03 ¹	4.164E+02 ⁵	-7.454E+04 ⁵	9.093E+04 ⁵	4.150E+05 ¹	-6.124E+03 ¹	3.885E+03 ¹	4.164E+02 ⁵	-6.218E+04 ⁵	1.043E+05 ⁵	3.753E+05 ¹
Y MAXIMUM	2.057E+03 ³	-1.212E+04 ⁴	-3.220E+03 ⁴	1.730E+05 ⁴	-1.141E+05 ³	1.555E+05 ⁴	-1.795E+03 ⁴	-1.199E+04 ⁴	-3.220E+03 ⁴	1.571E+05 ⁴	-1.550E+05 ⁴	2.928E+05 ⁴
Z MAXIMUM	9.457E+02 ²	4.023E+03 ²	3.039E+03 ²	-9.414E+04 ⁶	5.379E+04 ²	-6.927E+04 ²	1.445E+03 ²	3.872E+03 ²	3.039E+03 ²	-8.541E+04 ⁶	9.045E+04 ⁶	-1.142E+05 ²
GRAND TOTAL	7.860E+03	1.377E+04	5.893E+03	2.341E+05	2.364E+05	5.277E+05	7.722E+03	1.385E+04	5.893E+03	2.105E+05	2.847E+05	5.606E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (49)

	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X MAXIMUM	-5.585E+03 ¹	4.626E+03 ¹	4.164E+02 ⁵	-4.823E+04 ⁵	1.161E+05 ⁵	3.268E+05 ¹
Y MAXIMUM	-3.292E+03 ⁴	-1.167E+04 ⁴	-3.220E+03 ⁴	1.340E+05 ⁴	-2.100E+05 ⁴	4.275E+05 ⁴
Z MAXIMUM	1.922E+03 ²	3.659E+03 ²	3.039E+03 ²	-7.133E+04 ⁶	1.319E+05 ⁶	-1.571E+05 ²
GRAND TOTAL	7.855E+03	1.378E+04	5.893E+03	1.817E+05	3.435E+05	6.226E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (50)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(C)	VY(C)	VZ(C)	TX(C)	MY(C)	MZ(C)
X MAXIMUM	-5.681E+03 ¹	5.974E+03 ¹	5.707E+02 ²	-3.689E+04 ¹	1.216E+05 ⁵	3.264E+05 ¹	-4.807E+03 ¹	6.698E+03 ¹	5.707E+02 ²	-4.257E+04 ¹	1.242E+05 ⁵	2.477E+05 ¹
Y MAXIMUM	-6.342E+03 ⁴	-1.139E+04 ⁴	-2.552E+03 ⁴	9.996E+04 ⁴	-2.340E+05 ⁴	4.243E+05 ⁴	-7.846E+03 ⁴	-1.041E+04 ⁴	-2.552E+03 ⁴	6.469E+04 ⁴	-2.771E+05 ⁴	5.598E+05 ⁴
Z MAXIMUM	2.464E+03 ²	3.294E+03 ²	4.347E+03 ²	6.716E+04 ²	1.407E+05 ⁶	-1.561E+05 ²	2.893E+03 ²	2.924E+03 ²	4.347E+03 ²	8.473E+04 ²	1.697E+05 ⁶	-1.948E+05 ²
GRAND TOTAL	9.629E+03	1.410E+04	5.904E+03	1.460E+05	3.635E+05	6.206E+05	1.031E+04	1.361E+04	5.904E+03	1.255E+05	4.155E+05	6.922E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (50)

	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X MAXIMUM	-3.841E+03 ¹	7.294E+03 ¹	5.707E+02 ²	-4.739E+04 ¹	1.245E+05 ⁵	1.608E+05 ¹
Y MAXIMUM	-9.202E+03 ⁴	-9.234E+03 ⁴	-2.552E+03 ⁴	-2.629E+04 ³	-3.149E+05 ⁴	6.818E+05 ⁴
Z MAXIMUM	3.268E+03 ²	2.499E+03 ²	4.347E+03 ²	1.081E+05 ²	1.955E+05 ⁶	-2.285E+05 ²
GRAND TOTAL	1.108E+04	1.299E+04	5.904E+03	1.282E+05	4.662E+05	7.782E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (51)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(C)	VY(C)	VZ(C)	TX(C)	MY(C)	MZ(C)
X	1	1	2	1	5	1	1	1	2	1	5	7
X MAXIMUM	-3.073E+03	8.564E+03	7.182E+02	-5.217E+04	1.222E+05	1.611E+05	-2.004E+03	8.875E+03	7.182E+02	-5.442E+04	1.132E+05	1.168E+05
Y	4	4	3	4	4	4	4	4	3	4	4	4
Y MAXIMUM	-1.198E+04	-7.216E+03	1.577E+03	-3.354E+04	-3.076E+05	6.847E+05	-1.277E+04	-5.697E+03	1.577E+03	-7.184E+04	-3.166E+05	7.560E+05
Z	2	2	2	2	6	2	2	2	2	2	2	2
Z MAXIMUM	3.655E+03	1.927E+03	5.471E+03	1.409E+05	1.935E+05	-2.302E+05	3.864E+03	1.466E+03	5.471E+03	1.636E+05	2.062E+05	-2.489E+05
GRAND TOTAL	1.337E+04	1.250E+04	6.089E+03	1.709E+05	4.478E+05	7.809E+05	1.397E+04	1.183E+04	6.089E+03	2.132E+05	4.675E+05	8.328E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (51)

	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	5	1	2	5	5	5
X MAXIMUM	-1.279E+03	9.053E+03	7.182E+02	5.615E+04	1.026E+05	8.876E+04
Y	4	4	3	4	4	4
Y MAXIMUM	-1.337E+04	-4.093E+03	1.577E+03	-1.105E+05	-3.209E+05	8.100E+05
Z	2	1	2	2	2	2
Z MAXIMUM	4.014E+03	-1.269E+03	5.471E+03	1.913E+05	2.449E+05	-2.624E+05
GRAND TOTAL	1.449E+04	1.119E+04	6.089E+03	2.637E+05	4.849E+05	8.834E+05

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (52)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	5	1	1	5	5	7	5	1	1	5	5	1
X MAXIMUM	-1.273E+03	9.186E+03	-3.258E+03	7.158E+04	1.157E+05	8.000E+04	-1.273E+03	9.186E+03	-3.258E+03	7.158E+04	1.010E+05	-2.165E+05
Y	4	1	3	4	5	4	4	1	3	4	5	4
Y MAXIMUM	-1.480E+04	-2.259E+03	1.660E+03	-1.604E+05	1.353E+05	8.630E+05	-1.480E+04	-2.259E+03	1.660E+03	-1.604E+05	1.181E+05	8.908E+05
Z	2	2	2	2	6	2	2	2	2	2	2	2
Z MAXIMUM	4.105E+03	2.339E+03	5.941E+03	2.275E+05	2.084E+05	-3.155E+05	4.105E+03	2.339E+03	5.941E+03	2.275E+05	2.382E+05	-3.625E+05
GRAND TOTAL	1.593E+04	1.069E+04	7.251E+03	3.308E+05	3.159E+05	9.358E+05	1.593E+04	1.069E+04	7.251E+03	3.308E+05	3.819E+05	1.002E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (53)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	5	1	1	5	5	1	5	1	1	5	1	1
X MAXIMUM	-1.267E+03	9.634E+03	-3.526E+03	7.161E+04	1.012E+05	-2.162E+05	-1.267E+03	9.634E+03	-3.526E+03	7.161E+04	-1.493E+05	-4.099E+05
Y	4	1	5	4	5	4	4	1	5	4	5	4
Y MAXIMUM	-1.571E+04	-2.369E+03	-1.088E+03	-1.598E+05	1.184E+05	8.910E+05	-1.571E+04	-2.369E+03	-1.088E+03	-1.598E+05	1.166E+05	9.020E+05
Z	2	2	2	2	2	2	2	2	2	2	2	2
Z MAXIMUM	4.098E+03	2.604E+03	6.628E+03	2.273E+05	2.369E+05	-3.635E+05	4.098E+03	2.604E+03	6.628E+03	2.273E+05	3.701E+05	-4.158E+05
GRAND TOTAL	1.686E+04	1.116E+04	7.990E+03	3.304E+05	3.813E+05	1.003E+06	1.686E+04	1.116E+04	7.990E+03	3.304E+05	4.833E+05	1.099E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (54)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	7	1	1	5	1	1	7	1	1	5	1	1
X MAXIMUM	1.820E+03	9.989E+03	-3.722E+03	7.175E+04	-1.491E+05	-4.099E+05	1.820E+03	9.989E+03	-3.722E+03	7.175E+04	-2.263E+05	-6.171E+05
Y	4	1	4	4	3	4	4	1	4	4	3	4
Y MAXIMUM	-1.663E+04	-2.456E+03	1.701E+03	-1.599E+05	1.166E+05	9.019E+05	-1.663E+04	-2.456E+03	1.701E+03	-1.599E+05	1.218E+05	8.965E+05
Z	2	2	2	2	2	2	2	2	2	2	2	2
Z MAXIMUM	4.091E+03	2.796E+03	7.226E+03	2.280E+05	3.699E+05	-4.157E+05	4.091E+03	2.796E+03	7.226E+03	2.280E+05	5.197E+05	-4.737E+05
GRAND TOTAL	1.785E+04	1.158E+04	8.767E+03	3.311E+05	4.829E+05	1.099E+06	1.785E+04	1.158E+04	8.767E+03	3.311E+05	6.198E+05	1.228E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (55)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	7	1	1	5	1	1	7	1	1	5	1	1
X MAXIMUM	2.405E+03	1.023E+04	-3.864E+03	7.168E+04	-2.253E+05	-6.175E+05	2.405E+03	1.023E+04	-3.864E+03	7.168E+04	-3.032E+05	-8.237E+05
Y	4	1	4	4	3	4	4	1	4	4	3	4
Y MAXIMUM	-1.754E+04	-2.517E+03	2.517E+03	-1.602E+05	1.215E+05	8.965E+05	-1.754E+04	-2.517E+03	2.517E+03	-1.602E+05	1.091E+05	8.780E+05
Z	2	2	2	2	2	2	2	2	2	2	2	2
Z MAXIMUM	4.076E+03	2.942E+03	7.718E+03	2.276E+05	5.707E+05	-4.727E+05	4.076E+03	2.942E+03	7.718E+03	2.276E+05	6.762E+05	-5.320E+05
GRAND TOTAL	1.886E+04	1.192E+04	9.525E+03	3.309E+05	6.201E+05	1.228E+06	1.886E+04	1.192E+04	9.525E+03	3.309E+05	7.781E+05	1.378E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (56)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	7	1	1	5	1	1	7	1	1	5	1	1
X MAXIMUM	2.983E+03	1.036E+04	-3.984E+03	7.167E+04	-3.032E+05	-8.237E+05	2.983E+03	1.036E+04	-3.984E+03	7.167E+04	-3.835E+05	-1.033E+06
Y	4	1	4	4	3	4	4	1	4	4	4	4
Y MAXIMUM	-1.845E+04	-2.548E+03	3.334E+03	-1.602E+05	1.091E+05	8.780E+05	-1.845E+04	-2.548E+03	3.334E+03	-1.602E+05	1.439E+05	8.487E+05
Z	2	2	2	2	2	2	2	2	2	2	2	2
Z MAXIMUM	4.065E+03	3.057E+03	8.093E+03	2.276E+05	6.763E+05	-5.320E+05	4.065E+03	3.057E+03	8.093E+03	2.276E+05	8.395E+05	-5.937E+05
GRAND TOTAL	1.987E+04	1.215E+04	1.025E+04	3.308E+05	7.781E+05	1.378E+06	1.987E+04	1.215E+04	1.025E+04	3.308E+05	9.568E+05	1.548E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (57)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(C)	VY(C)	VZ(C)	TX(C)	MY(C)	MZ(C)
X	7	1	1	5	1	1	7	1	1	1	1	1
X MAXIMUM	2.643E+03	8.412E+03	-1.492E+03	7.166E+04	-1.453E+05	-1.092E+06	2.292E+03	8.566E+03	-1.492E+03	-7.505E+04	-1.537E+05	-1.186E+06
Y	4	4	4	4	4	4	4	4	4	4	1	4
Y MAXIMUM	-1.721E+04	1.463E+04	3.728E+03	-1.605E+05	-4.749E+04	8.594E+05	-1.528E+04	1.663E+04	3.728E+03	-1.626E+05	3.779E+04	6.859E+05
Z	2	2	2	2	2	2	2	4	2	2	2	2
Z MAXIMUM	4.168E+03	1.965E+03	8.713E+03	2.284E+05	9.499E+05	-3.929E+05	4.378E+03	1.465E+03	8.713E+03	3.493E+05	1.011E+06	-4.118E+05
GRAND TOTAL	1.874E+04	1.779E+04	1.047E+04	3.315E+05	9.752E+05	1.536E+06	1.686E+04	1.957E+04	1.047E+04	4.311E+05	1.034E+06	1.520E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (57)

	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	7	1	1	1	1	1
X MAXIMUM	1.907E+03	8.591E+03	-1.492E+03	-9.438E+04	-1.598E+05	-1.281E+06
Y	4	4	4	4	4	4
Y MAXIMUM	-1.312E+04	1.838E+04	3.728E+03	-1.572E+05	7.490E+04	4.916E+05
Z	2	4	2	2	2	2
Z MAXIMUM	4.521E+03	1.620E+03	8.713E+03	4.768E+05	1.057E+06	-4.247E+05
GRAND TOTAL	1.485E+04	2.114E+04	1.047E+04	5.430E+05	1.084E+06	1.522E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (58)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(C)	VY(C)	VZ(C)	TX(C)	MY(C)	MZ(C)
X	1	1	1	1	1	1	1	1	1	1	1	1
X MAXIMUM	2.308E+03	8.289E+03	-1.562E+03	-1.339E+05	-1.290E+05	-1.281E+06	3.255E+03	7.965E+03	-1.562E+03	-1.489E+05	-1.289E+05	-1.367E+06
Y	4	4	4	4	4	4	4	4	4	4	4	1
Y MAXIMUM	-8.555E+03	2.163E+04	4.607E+02	-1.313E+05	1.144E+05	4.916E+05	-5.984E+03	2.248E+04	4.607E+03	-1.143E+05	1.770E+05	3.361E+05
Z	2	4	2	2	2	2	2	4	2	2	2	2
Z MAXIMUM	4.589E+03	1.906E+03	8.902E+03	7.426E+05	8.902E+05	-4.250E+05	4.518E+03	1.981E+03	8.902E+03	8.464E+05	8.910E+05	-4.187E+05
GRAND TOTAL	1.115E+04	2.406E+04	1.137E+04	7.897E+05	9.198E+05	1.523E+06	9.399E+03	2.480E+04	1.137E+04	8.887E+05	9.358E+05	1.532E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (58)

	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	1	1	1	1	1	1
X MAXIMUM	4.158E+03	7.533E+03	-1.562E+03	-1.638E+05	-1.270E+05	-1.448E+06
Y	4	4	4	4	4	1
Y MAXIMUM	-3.332E+03	2.303E+04	4.607E+03	-9.015E+04	2.373E+05	3.561E+05
Z	2	4	2	2	2	2
Z MAXIMUM	4.386E+03	2.029E+03	8.902E+03	9.496E+05	8.797E+05	-4.068E+05
GRAND TOTAL	8.159E+03	2.523E+04	1.137E+04	9.880E+05	9.463E+05	1.578E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (59)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(C)	VY(C)	VZ(C)	TX(C)	MY(C)	MZ(C)
X	1	1	1	1	1	1	1	1	1	1	1	1
X MAXIMUM	5.674E+03	6.367E+03	-1.608E+03	-1.899E+05	-8.010E+04	-1.448E+06	6.470E+03	5.556E+03	-1.608E+03	-2.001E+05	-7.339E+04	-1.520E+06
Y	3	4	3	3	4	4	4	4	3	3	4	1
Y MAXIMUM	-2.197E+03	2.365E+04	-5.566E+03	-7.990E+04	2.524E+05	3.561E+05	5.118E+03	2.317E+04	-5.566E+03	-9.789E+04	3.179E+05	3.737E+05
Z	2	2	2	2	2	2	2	2	2	2	2	2
Z MAXIMUM	3.876E+03	-2.464E+03	8.993E+03	1.143E+06	6.078E+05	-4.057E+05	3.514E+03	-2.958E+03	8.993E+03	1.221E+06	5.580E+05	-3.731E+05
GRAND TOTAL	8.107E+03	2.573E+04	1.234E+04	1.178E+06	6.962E+05	1.578E+06	9.698E+03	2.517E+04	1.234E+04	1.256E+06	6.948E+05	1.653E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (59)

	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	1	1	1	1	2	1
X MAXIMUM	7.151E+03	4.647E+03	-1.608E+03	-2.094E+05	6.542E+04	-1.581E+06
Y	4	4	3	3	4	4
Y MAXIMUM	8.153E+03	2.229E+04	-5.566E+03	-1.230E+05	3.778E+05	-5.328E+05
Z	2	2	2	2	2	2
Z MAXIMUM	3.090E+03	-2.399E+03	8.993E+03	1.292E+06	4.983E+05	-3.349E+05
GRAND TOTAL	1.189E+04	2.421E+04	1.234E+04	1.330E+06	6.968E+05	1.764E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (60)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(C)	VY(C)	VZ(C)	TX(C)	MY(C)	MZ(C)
X	1	7	1	1	1	1	1	7	1	1	1	1
X MAXIMUM	7.933E+03	-4.353E+03	-1.870E+03	-2.196E+05	-1.373E+05	-1.575E+06	8.253E+03	-3.851E+03	-1.870E+03	-2.447E+05	-1.251E+05	-1.604E+06
Y	4	4	3	3	4	4	4	3	3	4	4	4
Y MAXIMUM	1.373E+04	2.010E+04	-7.368E+03	-1.799E+05	2.978E+05	-5.604E+05	1.729E+04	1.713E+04	-7.368E+03	2.254E+05	3.342E+05	-8.809E+05
Z	2	2	2	2	6	2	4	2	2	2	6	2
Z MAXIMUM	1.975E+03	-3.356E+03	9.311E+03	1.381E+06	-1.494E+05	-3.427E+05	1.523E+03	-3.669E+03	9.311E+03	1.385E+06	-1.356E+05	-2.822E+05
GRAND TOTAL	1.646E+04	3.178E+04	1.338E+04	1.434E+06	4.245E+05	1.769E+06	1.978E+04	1.881E+04	1.338E+04	1.458E+06	4.776E+05	1.911E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (60)

	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	1	7	1	1	1	1
X MAXIMUM	8.275E+03	-3.209E+03	-1.870E+03	-2.670E+05	-1.084E+05	-1.606E+06
Y	4	4	3	4	4	4
Y MAXIMUM	2.022E+04	1.355E+04	-7.368E+03	2.916E+05	3.585E+05	-1.145E+06
Z	4	2	2	2	3	1
Z MAXIMUM	1.782E+03	-3.850E+03	9.311E+03	1.369E+06	1.341E+05	2.251E+05
GRAND TOTAL	2.257E+04	1.536E+04	1.338E+04	1.470E+06	5.514E+05	2.046E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (61)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(C)	VY(C)	VZ(C)	TX(C)	MY(C)	MZ(C)
X	1	1	5	1	2	1	1	1	5	1	2	1
X MAXIMUM	7.231E+03	-3.647E+03	2.019E+03	-2.866E+05	-8.647E+04	-1.606E+06	6.603E+03	-4.688E+03	2.019E+03	-2.855E+05	-9.290E+04	-1.550E+06
Y	4	4	3	4	4	4	4	3	3	4	3	4
Y MAXIMUM	2.375E+04	5.092E+03	-8.420E+03	4.096E+05	2.118E+05	-1.145E+06	2.424E+04	2.649E+03	-8.420E+03	4.412E+05	-2.507E+05	-1.190E+06
Z	4	2	2	2	2	1	4	2	2	2	2	1
Z MAXIMUM	2.093E+03	-3.737E+03	9.239E+03	1.208E+06	-6.586E+05	2.252E+05	2.136E+03	-3.549E+03	9.239E+03	1.105E+06	-7.076E+05	2.172E+05
GRAND TOTAL	2.582E+04	8.527E+03	1.449E+04	1.387E+06	7.359E+05	2.046E+06	2.625E+04	7.093E+03	1.449E+04	1.320E+06	7.944E+05	2.023E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (61)

	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	1	1	5	1	2	1
X MAXIMUM	5.827E+03	-5.623E+03	2.019E+03	-2.817E+05	-9.723E+04	-1.480E+06
Y	4	4	3	4	3	4
Y MAXIMUM	2.419E+04	-2.165E+03	-8.420E+03	4.719E+05	-2.991E+05	-1.185E+06
Z	4	2	2	2	2	1
Z MAXIMUM	2.132E+03	-3.282E+03	9.239E+03	9.964E+05	-7.406E+05	2.075E+05
GRAND TOTAL	2.613E+04	7.517E+03	1.449E+04	1.256E+06	8.438E+05	1.963E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (62)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(C)	VY(C)	VZ(C)	TX(C)	MY(C)	MZ(C)
X	7	1	5	1	2	1	7	1	5	1	2	1
X MAXIMUM	-4.823E+03	-7.171E+03	2.387E+03	-2.511E+05	-1.345E+05	-1.484E+06	-4.777E+03	-7.303E+03	2.387E+03	-2.484E+05	-1.338E+05	-1.460E+06
Y	4	4	3	3	3	4	4	3	3	3	3	4
Y MAXIMUM	2.222E+04	9.516E+03	-8.799E+03	-5.283E+05	-1.409E+05	-1.184E+06	2.185E+04	-1.033E+04	-8.799E+03	-5.336E+05	-1.505E+05	-1.151E+06
Z	2	2	2	2	2	1	2	2	2	2	2	1
Z MAXIMUM	-3.009E+03	-2.124E+03	9.270E+03	7.062E+05	-1.025E+06	2.081E+05	-3.085E+03	-2.012E+03	9.270E+03	6.685E+05	-1.019E+06	2.047E+05
GRAND TOTAL	2.405E+04	1.239E+04	1.515E+04	1.086E+06	1.052E+06	1.964E+06	2.366E+04	1.311E+04	1.515E+04	1.064E+06	1.050E+06	1.923E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (62)

	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	7	1	5	1	2	1
X MAXIMUM	-4.724E+03	-7.425E+03	2.387E+03	-2.457E+05	-1.329E+05	-1.436E+06
Y	4	4	3	3	3	4
Y MAXIMUM	2.146E+04	-1.112E+04	-8.799E+03	-5.394E+05	-1.599E+05	-1.116E+06
Z	2	2	2	2	2	1
Z MAXIMUM	-3.157E+03	-1.897E+03	9.270E+03	6.311E+05	-1.013E+06	2.013E+05
GRAND TOTAL	2.325E+04	1.382E+04	1.515E+04	1.043E+06	1.047E+06	1.881E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (63)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	7	1	5	1	1	1	7	1	5	1	1	1
X MAXIMUM	-4.606E+03	7.745E+03	-2.680E+03	-2.344E+05	2.991E+05	1.408E+06	-4.606E+03	7.745E+03	-2.680E+03	-2.344E+05	2.873E+05	1.238E+06
Y	4	4	3	3	4	4	4	4	3	3	3	4
Y MAXIMUM	2.048E+04	1.094E+04	8.622E+03	-5.504E+05	3.552E+05	1.057E+06	2.048E+04	1.094E+04	8.622E+03	-5.504E+05	3.336E+05	8.163E+05
Z	2	6	2	2	2	2	2	6	2	2	2	2
Z MAXIMUM	-3.327E+03	-1.339E+03	-9.325E+03	5.454E+05	1.039E+06	-2.280E+05	-3.327E+03	-1.339E+03	-9.325E+03	5.454E+05	8.331E+05	-2.070E+05
GRAND TOTAL	2.228E+04	1.417E+04	1.662E+04	9.964E+05	1.165E+06	1.837E+06	2.228E+04	1.417E+04	1.662E+04	9.964E+05	1.002E+06	1.552E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (64)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	7	1	5	1	1	1	7	1	5	1	1	1
X MAXIMUM	-4.643E+03	7.693E+03	-2.947E+03	-2.336E+05	2.822E+05	1.239E+06	-4.643E+03	7.693E+03	-2.947E+03	-2.336E+05	2.715E+05	1.069E+06
Y	4	4	3	3	4	4	4	4	3	3	3	4
Y MAXIMUM	2.051E+04	1.093E+04	8.926E+03	-5.505E+05	3.333E+05	8.167E+05	2.051E+04	1.093E+04	8.926E+03	-5.505E+05	5.301E+05	5.756E+05
Z	2	6	2	2	2	2	2	6	2	2	2	2
Z MAXIMUM	-3.330E+03	-1.544E+03	-9.303E+03	5.451E+05	8.341E+05	-2.040E+05	-3.330E+03	-1.544E+03	-9.303E+03	5.451E+05	6.289E+05	-1.838E+05
GRAND TOTAL	2.235E+04	1.419E+04	1.701E+04	9.963E+05	1.001E+06	1.553E+06	2.235E+04	1.419E+04	1.701E+04	9.963E+05	9.685E+05	1.282E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (65)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(C)	VY(C)	VZ(C)	TX(C)	MY(C)	MZ(C)
X	7	5	1	1	1	5	7	5	1	1	1	5
X MAXIMUM	-4.677E+03	3.083E+03	7.512E+03	-2.345E+05	-1.103E+06	-1.877E+05	-4.751E+03	3.001E+03	7.512E+03	-3.299E+05	-1.016E+06	-2.124E+05
Y	4	3	4	3	4	3	4	3	4	3	4	3
Y MAXIMUM	2.057E+04	-9.544E+03	1.269E+04	-5.500E+05	-5.521E+05	5.218E+05	2.092E+04	-9.955E+03	1.269E+04	-5.570E+05	-4.935E+05	6.009E+05
Z	2	2	2	2	1	2	2	2	2	2	1	2
Z MAXIMUM	-3.319E+03	9.197E+03	1.637E+03	5.458E+05	1.546E+05	6.546E+05	-2.479E+03	9.458E+03	1.637E+03	5.447E+05	1.425E+05	5.790E+05
GRAND TOTAL	2.244E+04	1.631E+04	1.525E+04	9.963E+05	1.282E+06	9.678E+05	2.247E+04	1.627E+04	1.525E+04	1.006E+06	1.172E+06	1.001E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (65)

	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	7	5	1	1	1	5
X MAXIMUM	-4.786E+03	2.896E+03	7.512E+03	-4.172E+05	-9.218E+05	-2.363E+05
Y	4	3	4	3	4	3
Y MAXIMUM	2.110E+04	-1.028E+04	1.269E+04	-5.592E+05	-4.309E+05	6.829E+05
Z	4	2	2	2	1	2
Z MAXIMUM	1.859E+03	9.643E+03	1.637E+03	5.405E+05	1.292E+05	5.016E+05
GRAND TOTAL	2.241E+04	1.635E+04	1.525E+04	1.021E+06	1.056E+06	1.047E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (66)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(C)	VY(C)	VZ(C)	TX(C)	MY(C)	MZ(C)
X	7	5	1	1	1	5	7	1	1	1	1	5
X MAXIMUM	-4.749E+03	2.664E+03	7.517E+03	-5.919E+05	-8.206E+05	-2.361E+05	-4.659E+03	-2.564E+03	7.517E+03	-6.604E+05	-7.035E+05	-2.569E+05
Y	4	3	4	3	4	3	4	3	4	3	4	3
Y MAXIMUM	2.094E+04	-1.081E+04	1.268E+04	-5.466E+05	5.081E+05	6.829E+05	2.058E+04	-1.087E+04	1.268E+04	-5.337E+05	-4.335E+05	7.706E+05
Z	4	2	2	2	2	2	4	2	2	2	2	2
Z MAXIMUM	1.845E+03	9.778E+03	1.574E+03	5.175E+05	-1.681E+05	5.019E+05	1.813E+03	9.709E+03	1.574E+03	5.009E+05	-2.012E+05	4.231E+05
GRAND TOTAL	2.203E+04	1.707E+04	1.526E+04	1.059E+06	1.019E+06	1.047E+06	2.171E+04	1.747E+04	1.526E+04	1.074E+06	8.958E+05	1.099E+06

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ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (66)

	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	7	1	1	1	1	5
X MAXIMUM	-4.532E+03	-2.694E+03	7.517E+03	-7.181E+05	-5.808E+05	-2.763E+05
Y	4	3	4	3	4	3
Y MAXIMUM	2.005E+04	-1.084E+04	1.268E+04	-5.161E+05	-3.554E+05	8.584E+05
Z	2	2	2	2	2	6
Z MAXIMUM	2.073E+03	9.562E+03	1.574E+03	4.814E+05	-2.326E+05	-3.935E+05
GRAND TOTAL	2.133E+04	1.794E+04	1.526E+04	1.086E+06	7.786E+05	1.163E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (67)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(C)	VY(C)	VZ(C)	TX(C)	MY(C)	MZ(C)
X	7	1	1	1	1	5	7	1	1	1	1	5
X MAXIMUM	-4.123E+03	-2.900E+03	7.520E+03	-8.204E+05	-4.242E+05	-2.763E+05	-3.880E+03	-2.957E+03	7.520E+03	-8.524E+05	-2.878E+05	-2.902E+05
Y	4	4	4	3	4	3	4	4	4	3	3	3
Y MAXIMUM	1.829E+04	-1.068E+04	1.269E+04	-4.610E+05	-3.994E+05	8.580E+05	1.725E+04	-1.228E+04	1.269E+04	-4.300E+05	3.662E+05	9.420E+05
Z	2	2	2	2	2	6	2	2	2	2	2	6
Z MAXIMUM	3.957E+03	8.949E+03	1.560E+03	4.247E+05	-3.244E+05	-3.935E+05	4.746E+03	8.157E+03	1.560E+03	3.943E+05	-3.486E+05	-4.246E+05
GRAND TOTAL	2.027E+04	1.921E+04	1.529E+04	1.096E+06	7.652E+05	1.163E+06	1.974E+04	1.976E+04	1.529E+04	1.091E+06	6.852E+05	1.231E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (67)

	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	7	7	1	1	1	5
X MAXIMUM	-3.605E+03	3.220E+03	7.520E+03	-8.721E+05	-1.491E+05	-3.020E+05
Y	4	4	4	3	3	3
Y MAXIMUM	1.608E+04	-1.378E+04	1.269E+04	-3.951E+05	4.077E+05	1.023E+06
Z	2	2	2	2	2	6
Z MAXIMUM	5.496E+03	8.095E+03	1.560E+03	3.619E+05	-3.701E+05	-4.534E+05
GRAND TOTAL	1.919E+04	2.029E+04	1.529E+04	1.078E+06	6.398E+05	1.311E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (68)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(C)	VY(C)	VZ(C)	TX(C)	MY(C)	MZ(C)
X	5	7	1	1	2	5	5	7	1	1	1	5
X MAXIMUM	3.165E+03	3.899E+03	7.514E+03	-8.843E+05	-5.719E+04	-3.020E+05	3.217E+03	4.142E+03	7.514E+03	-8.755E+05	1.685E+05	-3.067E+05
Y	4	4	4	3	3	3	4	4	4	3	3	3
Y MAXIMUM	1.299E+04	-1.677E+04	1.266E+04	-3.055E+05	4.760E+05	1.024E+06	1.143E+04	-1.787E+04	1.266E+04	-2.613E+05	5.057E+05	1.092E+06
Z	2	2	2	2	2	6	2	2	2	2	2	6
Z MAXIMUM	7.007E+03	6.825E+03	1.576E+03	2.804E+05	-4.356E+05	-4.532E+05	7.591E+03	6.169E+03	1.576E+03	2.407E+05	-4.463E+05	-4.734E+05
GRAND TOTAL	1.800E+04	2.141E+04	1.526E+04	1.024E+06	7.217E+05	1.312E+06	1.754E+04	2.180E+04	1.526E+04	9.889E+05	7.474E+05	1.393E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (68)

	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	5	7	1	1	1	5
X MAXIMUM	3.244E+03	4.352E+03	7.514E+03	-8.541E+05	3.070E+05	-3.091E+05
Y	4	4	4	3	3	3
Y MAXIMUM	9.781E+03	-1.883E+04	1.266E+04	-2.147E+05	5.313E+05	1.154E+06
Z	2	2	2	2	2	6
Z MAXIMUM	8.114E+03	5.463E+03	1.576E+03	2.003E+05	-4.534E+05	-4.905E+05
GRAND TOTAL	1.714E+04	2.211E+04	1.526E+04	9.448E+05	8.070E+05	1.486E+06

ELEMENT TYPE (3/D P I P E) / / / ELEMENT NUMBER (69)

	PX(I)	VY(I)	VZ(I)	TX(I)	MY(I)	MZ(I)	PX(J)	VY(J)	VZ(J)	TX(J)	MY(J)	MZ(J)
X	5	7	1	1	1	5	5	7	1	1	1	5
X MAXIMUM	3.207E+03	-4.946E+03	-7.016E+03	-7.749E+05	-4.444E+05	3.042E+05	3.207E+03	-4.946E+03	-7.016E+03	-7.749E+05	-5.074E+05	2.991E+05
Y	3	4	4	1	3	3	3	4	4	1	3	3
Y MAXIMUM	-9.418E+03	2.212E+04	-9.347E+03	1.906E+05	-3.782E+05	-1.227E+06	-9.418E+03	2.212E+04	-9.347E+03	1.906E+05	-3.751E+05	-1.277E+06
Z	2	2	2	2	2	6	2	2	2	2	2	6
Z MAXIMUM	9.047E+03	-3.431E+03	-2.132E+03	1.086E+05	4.950E+05	4.988E+05	9.047E+03	-3.431E+03	-2.132E+03	1.086E+05	4.759E+05	5.191E+05
GRAND TOTAL	1.657E+04	2.433E+04	1.223E+04	8.250E+05	8.212E+05	1.549E+06	1.657E+04	2.433E+04	1.223E+04	8.250E+05	8.415E+05	1.659E+06

SUMMARY OF SUPPORT FORCES/MOMENTS IN GLOBAL/LOCAL SYSTEMS

BDRY= BOUNDARY ELEMENTS (SPRING)
 THAM= THERMAL ANCHOR MOTION
 SEAM= SEISMIC ANCHOR MOTION
 SNBR= SNUBBER ELEMENT

LOAD CASE 2 LOAD CASE 3 - ENVEL RESP SPECTRUM ANAL.

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KIND OF SUPPORT	NODE NUMBER	FX	FY	GLOBAL COMPONENTS				LOCAL COMPONENTS	
				FZ	MX	MY	MZ	FL	ML
BDRY	7090	10114.	0.	0.	0.	0.	0.	10114.	0.
BDRY	7090	0.	12699.	0.	0.	0.	0.	12699.	0.
BDRY	7090	0.	0.	10837.	0.	0.	0.	10837.	0.
BDRY	7090	0.	0.	0.	941604.	0.	0.	0.	941604.
BDRY	7090	0.	0.	0.	0.	1229679.	0.	0.	1229679.
BDRY	3047	0.	0.	93.	0.	0.	718680.	0.	718680.
BDRY	3116	0.	0.	431.	0.	0.	0.	93.	0.
BDRY	3210	16423.	0.	0.	0.	0.	0.	431.	0.
BDRY	3210	0.	0.	193.	0.	0.	0.	16423.	0.
BDRY	3250	12235.	0.	0.	0.	0.	0.	193.	0.
BDRY	3250	0.	24327.	0.	0.	0.	0.	12235.	0.
BDRY	3250	0.	0.	16565.	0.	0.	0.	24327.	0.
BDRY	3250	0.	0.	0.	1658742.	0.	0.	16565.	0.
BDRY	3250	0.	0.	0.	0.	841523.	0.	0.	1658742.
BDRY	3250	0.	0.	0.	0.	0.	825011.	0.	841523.
SNBR	3035	0.	27691.	0.	0.	0.	0.	0.	825011.
SNBR	3083	0.	0.	18549.	0.	0.	0.	27691.	0.
								18549.	0.

RESPONSE SPECTRUM TIME LOG
 TOTAL FOR SPECTRUM ANALYSIS = .00

BENCHMARK PROBLEM 1
HIGHER FREQUENCY RESPONSE
(RIGID RESPONSE)

STATIC ANALYSIS

STRUCTURE LOAD CASE	ELEMENT A	LOAD B	MULTIPLIERS C	D
1 ENVELOPE X EXCITATION	.000	.000	.000	.000
2 ENVELOPE Y EXCITATION	.000	.000	.000	.000
3 ENVELOPE Z EXCITATION	.000	.000	.000	.000

STATIC ANALYSIS

LOAD CASE 1

DISPLACEMENTS/ROTATIONS OF UNRESTRAINED NODES

NODE NUMBER	X-TRANSLATION	Y-TRANSLATION	Z-TRANSLATION	X-ROTATION	Y-ROTATION	Z-ROTATION
7090	-1.14014E-07	1.49221E-08	-2.51521E-08	3.53936E-09	-1.28977E-08	-2.45806E-08
3001	-8.64138E-05	-5.64892E-05	1.64110E-05	3.94182E-07	-1.47047E-06	-2.79357E-06
3005	-1.16416E-04	-7.79118E-05	2.31053E-05	6.02290E-07	-2.29163E-06	-4.33859E-06
3010	-1.63429E-04	-1.11581E-04	3.34556E-05	9.20537E-07	-3.61437E-06	-6.80424E-06
3011	-2.64331E-04	-1.82951E-04	5.47078E-05	1.56132E-06	-6.57164E-06	-1.21799E-05
3012	-4.69354E-04	-3.36026E-04	1.05259E-04	1.96386E-06	-9.60363E-06	-1.72521E-05
3019	-8.73729E-04	-6.82161E-04	2.52151E-04	1.92340E-07	-8.86549E-06	-1.34626E-05
3021	-1.01265E-03	-7.99966E-04	3.46671E-04	-2.86899E-06	-3.42377E-06	-1.45005E-06
3023	-1.02547E-03	-7.91576E-04	3.50831E-04	-3.40447E-06	-2.32787E-06	7.68475E-07
3024	-1.07369E-03	-6.74009E-04	3.27621E-04	-5.50184E-06	2.25712E-06	9.34110E-06
3026	-1.11339E-03	-4.09741E-04	2.29508E-04	-7.22930E-06	6.61370E-06	1.61743E-05
3028	-1.13714E-03	-7.03527E-05	7.61587E-05	-8.14473E-06	9.51709E-06	1.94691E-05
3030	-1.15567E-03	5.38470E-04	-2.47617E-04	-8.24776E-06	1.11398E-05	1.87493E-05
3032	-1.16798E-03	1.02420E-03	-5.55696E-04	-7.14738E-06	9.07521E-06	1.28079E-05
3035	-1.19401E-03	1.29506E-03	-7.63461E-04	-5.72502E-06	4.44320E-06	5.47823E-06
3037	-1.24513E-03	1.38054E-03	-8.21103E-04	-4.11724E-06	-1.31324E-06	-2.65557E-06
3038	-1.32337E-03	1.20809E-03	-7.19931E-04	-2.42542E-06	-6.68255E-06	-1.11621E-05
3040	-1.42175E-03	8.17544E-04	-4.89812E-04	-1.42832E-06	-1.04636E-05	-1.66526E-05
3044	-1.46359E-03	6.28388E-04	-3.75082E-04	-1.35891E-06	-1.13738E-05	-1.74178E-05
3047	-1.48376E-03	5.33571E-04	-3.16162E-04	-1.41005E-06	-1.16926E-05	-1.74189E-05
3050	-1.50270E-03	4.46472E-04	-2.60473E-04	-1.51077E-06	-1.19161E-05	-1.71839E-05
3053	-1.51746E-03	3.72055E-04	-2.11285E-04	-1.64371E-06	-1.20549E-05	-1.67902E-05
3056	-1.53077E-03	2.57805E-04	-1.31227E-04	-1.94756E-06	-1.21745E-05	-1.58308E-05
3059	-1.53159E-03	2.38524E-04	-1.17045E-04	-2.01238E-06	-1.21818E-05	-1.56239E-05
3062	-1.53116E-03	1.64904E-04	-6.09533E-05	-2.30150E-06	-1.21669E-05	-1.47193E-05
3065	-1.51777E-03	4.62462E-05	3.57920E-05	-2.94140E-06	-1.19607E-05	-1.28565E-05
3068	-1.50507E-03	-3.59025E-06	7.88208E-05	-3.30725E-06	-1.17617E-05	-1.18739E-05
3071	-1.47147E-03	-8.77508E-05	1.51609E-04	-4.12854E-06	-1.11694E-05	-9.95903E-06
3074	-1.46367E-03	-9.95914E-05	1.60657E-04	-4.28283E-06	-1.10325E-05	-9.64621E-06
3077	-1.45597E-03	-1.10687E-04	1.68815E-04	-4.43639E-06	-1.08882E-05	-9.35200E-06
3080	-1.35482E-03	-1.97870E-04	1.83609E-04	-6.04345E-06	-8.89453E-06	-7.16205E-06
3083	-1.28294E-03	-2.10964E-04	1.13092E-04	-6.52600E-06	-7.62772E-06	-7.46394E-06
3086	-1.25995E-03	-2.11219E-04	8.73761E-05	-6.59073E-06	-7.26520E-06	-7.74519E-06
3089	-1.18874E-03	-2.12501E-04	1.84170E-05	-6.61050E-06	-6.28820E-06	-8.80138E-06
3092	-1.01116E-03	-2.13953E-04	-1.06759E-04	-6.06595E-06	-4.43404E-06	-1.13270E-05
2095	-8.64516E-04	-2.15175E-04	-1.79288E-04	-5.33264E-06	-3.23234E-06	-1.29505E-05
3098	-8.40284E-04	-2.15340E-04	-1.89412E-04	-5.19706E-06	-3.05108E-06	-1.31746E-05
3100	-5.36984E-04	-2.18100E-04	-2.83613E-04	-3.30369E-06	-1.03301E-06	-1.48049E-05
3101	-2.13259E-04	-2.22316E-04	-3.30686E-04	-9.21530E-07	8.93793E-07	-1.43943E-05
3104	-2.01597E-04	-2.22483E-04	-3.31368E-04	-8.27547E-07	9.63287E-07	-1.43336E-05
3107	-3.95202E-05	-2.25500E-04	-3.33257E-04	5.31272E-07	1.93944E-06	-1.30948E-05
3110	1.66531E-04	-2.13626E-04	-3.02981E-04	2.46971E-06	3.28348E-06	-1.90292E-05
3113	2.92633E-04	-1.72362E-04	-2.31194E-04	4.04283E-06	4.26516E-06	-6.33763E-06
3115	3.62641E-04	-1.38152E-04	-5.34076E-05	5.90916E-06	5.11302E-06	-5.52524E-07
3116	3.48960E-04	-2.26524E-04	1.65575E-04	7.20337E-06	4.69160E-06	3.44871E-06
3119	3.51770E-04	-2.97152E-04	2.31618E-04	7.56029E-06	3.90236E-06	3.66149E-06
3120	3.53595E-04	-3.75970E-04	2.93732E-04	7.94437E-06	2.45903E-06	2.35935E-06
3122	3.53216E-04	-4.14474E-04	3.24313E-04	8.26309E-06	7.24206E-07	-4.63794E-07
3123	3.36963E-04	-3.61401E-04	2.84161E-04	8.51611E-06	-1.50706E-06	-5.87397E-06
3125	2.17782E-04	-2.08165E-04	1.28835E-04	8.27261E-06	-3.03025E-06	-1.09483E-05
3128	-7.85698E-05	-4.23784E-05	-8.97089E-05	7.14532E-06	-3.69339E-06	-1.38402E-05
3198	-4.09055E-04	-1.00243E-05	-2.44078E-04	5.13506E-06	-3.46845E-06	-1.27041E-05
3199	-6.49225E-04	-5.01569E-05	-3.15820E-04	2.46266E-06	-2.93230E-06	-8.65854E-06
3200	-7.77149E-04	-7.00083E-05	-3.28000E-04	-6.58503E-07	-2.38503E-06	-2.72332E-06

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3205	-7.62167E-04	-6.42906E-05	-2.72489E-04	-3.31584E-06	-1.81337E-06	3.67399E-06
3208	-6.16389E-04	-3.52598E-05	-1.56323E-04	-6.69273E-06	-1.28109E-06	7.96362E-06
3210	-4.02811E-04	6.62295E-06	9.11070E-06	-8.74070E-06	-8.27220E-07	7.83555E-06
3212	-2.83129E-04	5.56618E-05	2.21702E-04	-9.97015E-06	-1.38742E-07	5.99424E-06
3215	-2.00833E-04	1.57806E-04	3.72492E-04	-1.03675E-05	1.03825E-06	5.49386E-06
3220	-1.66913E-04	2.94436E-04	3.97558E-04	-1.02284E-05	2.84760E-06	4.43261E-06
3222	-2.01278E-04	4.20729E-04	1.45745E-04	-9.32889E-06	5.33058E-06	3.24311E-06
3225	-2.67239E-04	4.66905E-04	-1.47133E-04	-7.77250E-06	6.63729E-06	3.75994E-06
3230	-2.92776E-04	4.66280E-04	-1.98577E-04	-7.17133E-06	5.80253E-06	3.98743E-06
3235	-3.84323E-04	4.48601E-04	-3.13277E-04	-4.14897E-06	7.45025E-06	3.83133E-06
3237	-4.53613E-04	4.28220E-04	-3.41365E-04	3.99671E-07	8.40130E-06	2.27205E-06
3238	-4.57076E-04	4.09397E-04	-2.84799E-04	4.44356E-06	9.19269E-06	6.02618E-07
3240	-3.69182E-04	3.42915E-04	-1.65539E-04	7.70400E-06	9.53729E-06	-8.87872E-07
3243	-2.13316E-04	2.06116E-04	-4.86691E-05	8.21593E-06	8.49117E-06	-1.53235E-06
3245	-5.58828E-05	5.25242E-05	6.10105E-07	4.36363E-06	4.37783E-06	-8.65901E-07
3250	-1.86074E-08	1.55369E-08	1.54032E-09	4.36910E-09	4.45074E-09	-5.60673E-10

STATIC ANALYSIS

LOAD CASE 2

DISPLACEMENTS/ROTATIONS OF UNRESTRAINED NODES

NODE NUMBER	X-TRANSLATION	Y-TRANSLATION	Z-TRANSLATION	X-ROTATION	Y-ROTATION	Z-ROTATION
7090	1.64308E-08	-1.98258E-08	4.08602E-09	2.23963E-09	1.91731E-09	-1.10025E-09
3001	2.91744E-06	-1.08258E-05	-7.55834E-06	2.46344E-07	2.24688E-07	-1.00113E-07
3005	4.06232E-06	-1.39078E-05	-1.04124E-05	3.73004E-07	3.57904E-07	-1.25347E-07
3010	6.41730E-06	-1.77990E-05	-1.47422E-05	5.73430E-07	5.78959E-07	-1.49642E-07
3011	1.25261E-05	-2.47765E-05	-2.35589E-05	1.03013E-06	1.08986E-06	-1.89224E-07
3012	2.55285E-05	-3.61600E-05	-4.36331E-05	1.57137E-06	1.65596E-06	-2.83718E-07
3019	5.28030E-05	-6.47608E-05	-9.45542E-05	2.15553E-06	1.71014E-06	-9.71362E-07
3021	6.61790E-05	-1.03166E-04	-1.23358E-04	2.21881E-06	9.47012E-07	-1.46927E-06
3023	6.84277E-05	-1.10962E-04	-1.25408E-04	2.19206E-06	7.83328E-07	-1.50584E-06
3024	7.77661E-05	-1.42590E-04	-1.27735E-04	1.97418E-06	6.65178E-08	-1.20978E-06
3026	8.60352E-05	-1.64719E-04	-1.19154E-04	1.58821E-06	-6.95673E-07	-3.26295E-07
3028	9.13309E-05	-1.66127E-04	-9.99291E-05	1.16874E-06	-1.31812E-06	7.03248E-07
3030	9.49879E-05	-1.28460E-04	-4.91820E-05	5.66853E-07	-2.00581E-06	1.96582E-06
3032	9.44457E-05	-6.70318E-05	1.26652E-05	1.77569E-07	-2.17656E-06	2.30872E-06
3035	9.29958E-05	-7.61998E-06	7.15669E-05	-3.93290E-08	-1.82509E-06	1.90513E-06
3037	9.36858E-05	3.41725E-05	1.14150E-04	-1.56608E-07	-1.02991E-06	1.06895E-06
3038	9.87943E-05	5.03924E-05	1.30364E-04	-2.40524E-07	3.32673E-08	8.78037E-08
3040	1.09290E-04	4.11778E-05	1.16044E-04	-3.48998E-07	1.12269E-06	-7.86163E-07
3044	1.14857E-04	3.18967E-05	1.02292E-04	-4.05965E-07	1.51043E-06	-1.07130E-06
3047	1.17765E-04	2.64080E-05	9.41074E-05	-4.36479E-07	1.68239E-06	-1.19743E-06
3050	1.20627E-04	2.08762E-05	8.57530E-05	-4.66308E-07	1.82906E-06	-1.30720E-06
3053	1.23357E-04	1.56298E-05	7.78443E-05	-4.92720E-07	1.94613E-06	-1.39745E-06
3056	1.29012E-04	6.04846E-06	6.36043E-05	-5.34284E-07	2.11337E-06	-1.52255E-06
3059	1.30257E-04	4.21133E-06	6.08734E-05	-5.41634E-07	2.14034E-06	-1.54080E-06
3062	1.35929E-04	-3.41533E-06	4.94115E-05	-5.71376E-07	2.23857E-06	-1.59566E-06
3065	1.48608E-04	-1.77795E-05	2.66801E-05	-6.27205E-07	2.37330E-06	-1.60186E-06
3068	1.56492E-04	-2.46852E-05	1.45506E-05	-6.55681E-07	2.41810E-06	-1.54594E-06
3071	1.73875E-04	-3.69442E-05	-1.12101E-05	-7.08968E-07	2.45438E-06	-1.28504E-06
3074	1.77131E-04	-3.86873E-05	-1.57903E-05	-7.17696E-07	2.45237E-06	-1.21364E-06
3077	1.80352E-04	-4.02602E-05	-2.03569E-05	-7.25592E-07	2.44798E-06	-1.13472E-06
3080	2.04955E-04	-4.61296E-05	-6.89262E-05	-7.09043E-07	2.23154E-06	1.55152E-07
3083	1.99905E-04	-4.38498E-05	-8.33911E-05	-6.12180E-07	2.00996E-06	1.03553E-06
3086	1.95889E-04	-4.36158E-05	-8.61220E-05	-5.69709E-07	1.94288E-06	1.28220E-06
3089	1.80065E-04	-4.30933E-05	-9.22731E-05	-4.03399E-07	1.76391E-06	1.91040E-06
3092	1.33333E-04	-4.22505E-05	-9.74296E-05	8.44595E-08	1.43956E-06	2.85893E-06
3095	9.42719E-05	-4.19165E-05	-9.46881E-05	4.90686E-07	1.23910E-06	3.24399E-06
3098	8.79558E-05	-4.18862E-05	-9.37944E-05	5.56211E-07	1.20952E-06	3.28348E-06
3100	1.34098E-05	-4.18492E-05	-7.45395E-05	1.29318E-06	8.91290E-07	3.33018E-06
3101	-5.44719E-05	-4.24066E-05	-3.94872E-05	1.92257E-06	6.04931E-07	2.65608E-06
3104	-5.66191E-05	-4.24890E-05	-3.79496E-05	1.94201E-06	5.94600E-07	2.61782E-06
3107	-8.41428E-05	-4.30123E-05	-1.40280E-05	2.17786E-06	4.55191E-07	1.98147E-06
3110	-1.09207E-04	-4.59612E-05	2.60101E-05	2.36105E-06	2.45131E-07	7.84575E-07
3113	-1.11720E-04	-4.78720E-05	6.25631E-05	2.35371E-06	4.50892E-09	-4.33279E-07
3115	-8.61462E-05	-2.57012E-05	1.02311E-04	2.04541E-06	-5.54577E-07	-2.01529E-06
3116	-5.87625E-05	4.78956E-05	9.52564E-05	1.39829E-06	-1.46769E-06	-2.60011E-06
3119	-5.95862E-05	8.65513E-05	7.02246E-05	1.03624E-06	-1.95384E-06	-2.28463E-06
3120	-6.09339E-05	1.24478E-04	2.83795E-05	5.96737E-07	-2.44184E-06	-1.43896E-06
3122	-6.24853E-05	1.42301E-04	-2.11489E-05	1.72559E-07	-7.69113E-06	-2.29997E-07
3123	-6.17137E-05	1.26349E-04	-8.86056E-05	-4.12148E-07	-2.56568E-06	1.58681E-06
3125	-3.28554E-05	7.96356E-05	-1.27093E-04	-1.05864E-06	-2.04117E-06	2.94409E-06
3128	3.98352E-05	3.38470E-05	-1.19634E-04	-1.91504E-06	-1.19679E-06	3.42407E-06
3198	1.15257E-04	2.59446E-05	-7.02665E-05	-2.69341E-06	-3.32388E-07	2.86883E-06
3199	1.65572E-04	3.51726E-05	-8.26429E-06	-3.19784E-06	5.02691E-07	1.81945E-06
3200	1.91164E-04	4.05483E-05	5.82593E-05	-3.25214E-06	1.39908E-06	5.31464E-07

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3205	1.88873E-04	4.10812E-05	1.19582E-04	-2.72165E-06	2.41851E-06	-7.65765E-07
3208	1.62250E-04	3.66452E-05	1.59080E-04	-1.64126E-06	3.51453E-06	-1.67511E-06
3210	1.21959E-04	2.85031E-05	1.67239E-04	-1.43286E-07	4.70786E-06	-1.89579E-06
3212	9.89964E-05	1.48630E-05	1.17684E-04	1.64621E-06	5.92948E-06	-2.79640E-06
3215	5.71400E-05	-4.68684E-05	-1.63048E-05	3.23613E-06	6.57856E-06	-4.77588E-06
3220	3.25692E-05	-1.96207E-04	-2.02104E-04	4.83491E-06	6.56921E-06	-6.40726E-06
3222	1.27920E-04	-4.28190E-04	-3.33245E-04	6.87728E-06	5.29831E-06	-5.74969E-06
3225	2.50113E-04	-4.96681E-04	-2.04731E-04	7.89050E-06	3.71716E-06	-3.49963E-06
3230	2.73348E-04	-4.96772E-04	-1.47638E-04	7.98088E-06	3.32896E-06	-2.85447E-06
3235	3.13792E-04	-4.90531E-04	4.58818E-05	6.96749E-06	1.84107E-06	-4.77756E-07
3237	2.92749E-04	-4.87615E-04	1.91668E-04	3.22631E-06	-6.93087E-08	1.67802E-06
3238	2.45996E-04	-4.85442E-04	2.22959E-04	-1.58622E-06	-1.71403E-06	2.59039E-06
3240	1.76142E-04	-4.40057E-04	1.57102E-04	-6.73052E-06	-3.03102E-06	2.68161E-06
3243	9.30475E-05	-2.93719E-04	5.09419E-05	-9.25661E-06	-3.29647E-06	2.01776E-06
3245	2.20827E-05	-8.72784E-05	-3.16867E-06	-5.71526E-06	-1.79694E-06	8.09392E-07
3250	6.61198E-09	-3.02472E-08	-7.99985E-09	-6.11356E-09	-1.80878E-09	5.24083E-10

STATIC ANALYSIS

LOAD CASE 3

DISPLACEMENTS/ROTATIONS OF UNRESTRAINED NODES

NODE NUMBER	X-TRANSLATION	Y-TRANSLATION	Z-TRANSLATION	X-ROTATION	Y-ROTATION	Z-ROTATION
7090	-1.39563E-08	1.76263E-09	-1.70209E-08	4.06949E-09	2.54942E-09	-3.15115E-09
3001	-5.21945E-06	-1.17716E-05	-1.70794E-05	4.65843E-07	2.81469E-07	-3.60275E-07
3005	-7.03459E-06	-1.62395E-05	-2.28794E-05	7.26408E-07	4.30032E-07	-5.63616E-07
3010	-1.01486E-05	-2.32486E-05	-3.14460E-05	1.15225E-06	6.69256E-07	-8.90170E-07
3011	-1.74005E-05	-3.80539E-05	-4.91581E-05	2.13810E-06	1.22225E-06	-1.60259E-06
3012	-3.15090E-05	-7.05976E-05	-8.61265E-05	3.27563E-06	1.89812E-06	-2.26369E-06
3019	-5.29607E-05	-1.47304E-04	-1.76398E-04	4.05996E-06	2.59357E-06	-1.58927E-06
3021	-5.15485E-05	-1.80240E-04	-2.40364E-04	3.71688E-06	2.32404E-06	-2.95823E-07
3023	-5.12762E-05	-1.80586E-04	-2.48891E-04	3.61663E-06	2.18371E-06	6.47675E-07
3024	-5.26502E-05	-1.68160E-04	-2.78655E-04	3.18595E-06	1.23520E-06	2.05667E-06
3026	-5.94662E-05	-1.31368E-04	-2.90646E-04	2.77015E-06	-3.31897E-07	3.29795E-06
3028	-7.24123E-05	-7.86579E-05	-2.73728E-04	2.46739E-06	-1.96687E-06	4.04665E-06
3030	-1.06450E-04	2.67731E-05	-1.88122E-04	2.17801E-06	-3.98647E-06	4.33609E-06
3032	-1.47343E-04	1.24490E-04	-6.66265E-05	2.11118E-06	-4.47804E-06	3.66118E-06
3035	-1.84457E-04	1.93632E-04	4.51892E-05	2.15807E-06	-3.42182E-06	2.49455E-06
3037	-2.09354E-04	2.29859E-04	1.10523E-04	2.29738E-06	-1.32565E-06	9.26765E-07
3038	-2.17850E-04	2.15192E-04	1.11219E-04	2.48920E-06	1.05807E-06	-8.70040E-07
3040	-2.10678E-04	1.52975E-04	5.35061E-05	2.57670E-06	2.99380E-06	-2.21342E-06
3044	-2.04486E-04	1.19469E-04	1.38529E-05	2.55415E-06	3.52488E-06	-2.49759E-06
3047	-2.01070E-04	1.02218E-04	-5.89858E-06	2.52755E-06	3.72443E-06	-2.56731E-06
3050	-1.97581E-04	8.59890E-05	-2.48780E-05	2.49288E-06	3.87230E-06	-2.58747E-06
3053	-1.94100E-04	7.18626E-05	-4.16821E-05	2.45526E-06	3.97294E-06	-2.56909E-06
3056	-1.86438E-04	4.95453E-05	-6.62120E-05	2.38668E-06	4.08124E-06	-2.47337E-06
3059	-1.84746E-04	4.56751E-05	-7.27620E-05	2.37398E-06	4.09355E-06	-2.44844E-06
3062	-1.77188E-04	3.05967E-05	-9.04258E-05	2.32412E-06	4.12218E-06	-2.32830E-06
3065	-1.61416E-04	5.39613E-06	-1.20106E-04	2.24450E-06	4.08928E-06	-2.03562E-06
3068	-1.52359E-04	-5.81557E-06	-1.32653E-04	2.21493E-06	4.03089E-06	-1.85823E-06
3071	-1.33706E-04	-2.54551E-05	-1.53251E-04	2.18672E-06	3.83466E-06	-1.45300E-06
3074	-1.30450E-04	-2.83000E-05	-1.55601E-04	2.18706E-06	3.78738E-06	-1.37595E-06
3077	-1.27214E-04	-3.10356E-05	-1.57655E-04	2.18954E-06	3.73771E-06	-1.29908E-06
3080	-9.88684E-05	-5.26419E-05	-1.57312E-04	2.26303E-06	3.07848E-06	-4.33202E-07
3083	-9.45570E-05	-5.65340E-05	-1.32723E-04	2.29971E-06	2.69917E-06	-1.26199E-07
3086	-9.44183E-05	-5.72043E-05	-1.24344E-04	2.30275E-06	2.59706E-06	-7.30005E-08
3089	-9.48190E-05	-5.87314E-05	-1.01639E-04	2.31090E-06	2.32857E-06	3.43882E-09
3092	-9.50731E-05	-6.18010E-05	-5.79665E-05	2.23673E-06	1.83187E-06	-4.69800E-08
3095	-9.37259E-05	-6.36051E-05	-3.07598E-05	2.08840E-06	1.51447E-06	-1.76723E-07
3098	-9.33450E-05	-6.38823E-05	-2.68035E-05	2.05781E-06	1.46643E-06	-2.01041E-07
3100	-8.54927E-05	-6.65903E-05	-1.30750E-05	1.56708E-06	9.23015E-07	-5.06536E-07
3101	-7.08551E-05	-6.85348E-05	3.94816E-05	8.82012E-07	3.79871E-07	-8.12695E-07
3104	-7.01877E-05	-6.86127E-05	4.01492E-05	8.54405E-07	3.59723E-07	-8.23206E-07
3107	-5.98534E-05	-6.92675E-05	4.71928E-05	4.59507E-07	6.96448E-08	-9.56204E-07
3110	-4.23912E-05	-6.81413E-05	4.88914E-05	-7.17153E-08	-3.48719E-07	-1.08984E-06
3113	-2.62839E-05	-6.13996E-05	4.03919E-05	-4.49762E-07	-6.65168E-07	-1.15029E-06
3115	-5.51415E-06	-4.14188E-05	1.18769E-05	-7.71364E-07	-9.18461E-07	-1.12261E-06
3116	4.91202E-06	-1.12035E-05	-2.41689E-05	-8.18502E-07	-7.20357E-07	-8.89740E-07
3119	4.78363E-06	1.10767E-06	-3.35320E-05	-7.68579E-07	-4.41930E-07	-7.19296E-07
3120	4.93758E-06	1.29002E-05	-3.81316E-05	-7.03385E-07	-1.77523E-08	-4.60444E-07
3122	5.45984E-06	1.94516E-05	-3.40378E-05	-6.35094E-07	3.98263E-07	-1.54056E-07
3123	7.23815E-06	1.85601E-05	-1.57273E-05	-5.17348E-07	7.96508E-07	2.86259E-07
3125	1.54156E-05	9.63400E-06	8.33346E-06	-3.09377E-07	9.63637E-07	5.96600E-07
3128	3.28252E-05	8.74806E-08	2.55402E-05	2.93561E-08	9.69817E-07	6.67908E-07
3198	4.85016E-05	-2.18684E-06	2.35427E-05	3.92105E-07	8.88012E-07	4.74559E-07
3199	5.64108E-05	-1.70839E-06	1.04640E-05	5.48311E-07	7.71999E-07	1.56428E-07
3200	5.66034E-05	-2.56776E-06	-4.96908E-06	5.62664E-07	6.24751E-07	-2.08775E-07

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3205	4.85238E-05	-4.67381E-06	-1.83555E-05	3.51543E-07	4.39100E-07	-5.39995E-07
3208	3.44352E-05	-7.37785E-06	-2.40122E-05	-3.65233E-08	2.35680E-07	-7.21216E-07
3210	1.79856E-05	-9.99656E-06	-1.92067E-05	-5.07114E-07	2.91315E-08	-6.73596E-07
3212	6.33339E-06	-1.28543E-05	-1.69265E-06	-9.61582E-07	-1.59520E-07	-5.51432E-07
3215	-1.52211E-06	-1.95365E-05	1.96289E-05	-1.26286E-06	-1.87459E-07	-4.99263E-07
3220	-4.43843E-06	-2.86567E-05	3.29768E-05	-1.48649E-06	1.69364E-08	-3.95119E-07
3222	4.19207E-07	-3.54094E-05	-5.27612E-06	-1.65483E-06	4.21637E-07	-2.98911E-07
3225	9.09934E-06	-3.43928E-05	-4.25915E-05	-1.34878E-06	5.00266E-07	-4.14755E-07
3230	1.26582E-05	-3.31691E-05	-5.20576E-05	-1.15407E-06	4.54148E-07	-4.52165E-07
3235	2.46539E-05	-2.77409E-05	-6.95096E-05	-1.99437E-07	3.05743E-07	-3.79817E-07
3237	3.04635E-05	-2.35409E-05	-5.86731E-05	7.97663E-07	1.54269E-07	-9.84412E-08
3238	2.93717E-05	-2.33407E-05	-3.53352E-05	1.03339E-06	-2.66443E-08	1.11402E-07
3240	2.40661E-05	-2.94344E-05	-1.58654E-05	6.36769E-07	-2.40878E-07	2.24821E-07
3243	1.49427E-05	-2.98584E-05	-7.96928E-06	-8.39805E-08	-3.78345E-07	2.14894E-07
3245	4.50870E-06	-1.37753E-05	-4.76624E-06	-4.02419E-07	-2.59420E-07	9.63491E-08
3250	1.57779E-05	-5.64761E-09	-1.27885E-08	-5.91924E-10	-2.89077E-10	6.23863E-11

PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
1	TANGENT	1	END-I	-9906.553	-5267.576	3557.744	-402.39	-158998.22	-230277.01
			END-J	-9906.553	-5267.576	3557.744	-402.39	-92329.52	-131567.69
1	TANGENT	2	END-I	2476.513	-663.761	-472.838	65.08	23639.73	-20770.54
			END-J	2476.513	-663.761	-472.838	65.08	14779.20	-8332.30
1	TANGENT	3	END-I	-1778.537	-1058.455	-769.708	856.95	31985.85	-47698.74
			END-J	-1778.537	-1058.455	-769.708	856.95	17562.25	-27864.31
2	TANGENT	1	END-I	-9766.197	-5162.447	3457.850	-452.13	-92338.64	-131561.10
			END-J	-9766.197	-5162.447	3457.850	-452.13	-76807.32	-108373.33
2	TANGENT	2	END-I	2384.911	-539.103	-472.689	70.13	14778.58	-8333.36
			END-J	2384.911	-539.103	-472.689	70.13	12655.44	-5911.91
2	TANGENT	3	END-I	-1737.748	-1028.210	-682.739	861.18	17559.94	-27865.64
			END-J	-1737.748	-1028.210	-682.739	861.18	14493.33	-23247.31
3	TANGENT	1	END-I	-9531.926	-4996.664	3291.275	-452.13	-76807.32	-108373.33
			END-J	-9531.926	-4996.664	3291.275	-452.13	-62024.15	-85930.19
3	TANGENT	2	END-I	2234.395	-333.138	-471.874	70.13	12655.44	-5911.91
			END-J	2234.395	-333.138	-471.874	70.13	10535.96	-4415.58
3	TANGENT	3	END-I	-1669.675	-979.424	-540.189	861.18	14493.33	-23247.31
			END-J	-1669.675	-979.424	-540.189	861.18	12067.01	-18848.10
4	TANGENT	1	END-I	-9402.431	-4896.413	3101.741	44.37	-61635.92	-86210.25
			END-J	-9402.431	-4896.413	3101.741	44.37	-45770.52	-61165.11
4	TANGENT	2	END-I	2138.936	-199.532	-458.515	105.56	10555.69	-4367.47
			END-J	2138.936	-199.532	-458.515	105.56	8210.39	-3346.87
4	TANGENT	3	END-I	-1623.073	-944.341	-462.114	988.62	12151.17	-18787.68
			END-J	-1623.073	-944.341	-462.114	988.62	9787.46	-13957.37
5	TANGENT	1	END-I	-9227.947	-4790.016	3013.320	-19.84	-45854.23	-61102.39
			END-J	-9227.947	-4790.016	3013.320	-19.84	-20041.42	-20069.99
5	TANGENT	2	END-I	2033.840	-59.630	-460.880	89.71	8205.91	-3358.29
			END-J	2033.840	-59.630	-460.880	89.71	4257.90	-2847.49
5	TANGENT	3	END-I	-1576.094	-913.322	-360.199	950.67	9769.45	-13972.62
			END-J	-1576.094	-913.322	-360.199	950.67	6683.90	-6148.89
6	BEND	1	END-I	-8901.833	-5355.150	373.993	-91.30	-8422.87	-27083.40
			CENTER	-9404.004	-4414.178	373.993	-777.05	-4917.86	18112.02
			END-J	-9807.046	-3426.676	373.993	-1099.81	-1361.01	54385.82
6	BEND	2	END-I	1826.120	386.327	-316.646	85.40	5093.44	-543.58
			CENTER	1856.108	197.050	-316.646	457.01	2135.79	-3242.43
			END-J	1866.529	5.696	-316.646	523.39	-844.38	-4180.39

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PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
6	BEND	3	END-I	-1484.716	-670.504	-543.057	939.31	8776.00	-2342.37
			CENTER	-1545.640	-514.735	-543.057	1576.60	3622.04	3140.85
			END-J	-1590.272	-353.540	-543.057	1682.08	-1570.11	7157.71
7	BEND	1	END-I	-9689.349	-1861.846	264.962	-1018.85	-2300.69	54355.75
			CENTER	-9815.529	-1002.670	264.962	-1124.84	-105.42	65711.94
			END-J	-9865.674	-135.726	264.962	-1037.39	2090.68	70225.04
7	BEND	2	END-I	1681.515	38.242	-188.059	380.19	-823.94	-4199.90
			CENTER	1678.365	-109.759	-188.059	240.72	-2342.39	-3916.37
			END-J	1662.213	-256.909	-188.059	-31.73	-3842.69	-2462.74
7	BEND	3	END-I	-1523.831	-184.568	-317.024	1480.33	-1935.00	7112.79
			CENTER	-1534.158	-49.866	-317.024	1193.94	-4566.45	8042.19
			END-J	-1532.600	85.223	-317.024	677.29	-7162.52	7902.02
8	BEND	1	END-I	-9540.948	874.929	387.642	-195.04	-5653.94	70035.70
			CENTER	-9526.303	1022.126	387.642	-278.15	-5111.62	68717.64
			END-J	-9509.387	1169.079	387.642	-352.88	-4568.09	67195.22
8	BEND	2	END-I	1573.006	-280.209	-171.694	-466.73	-3518.98	-2869.03
			CENTER	1568.492	-304.461	-171.694	-522.84	-3749.93	-2462.81
			END-J	1563.604	-328.641	-171.694	-582.52	-3979.98	-2022.93
8	BEND	3	END-I	-1471.716	226.431	-178.156	-29.10	-8030.08	7051.20
			CENTER	-1468.045	249.126	-178.156	-154.99	-8276.22	6720.78
			END-J	-1464.023	271.761	-178.156	-284.65	-8520.39	6358.88
9	TANGENT	1	END-I	-9250.735	1323.451	-389.361	-534.79	29536.00	60527.08
			END-J	-9250.735	1323.451	-389.361	-534.79	24544.51	43560.85
9	TANGENT	2	END-I	1519.973	-275.725	34.413	-661.44	-4448.00	222.67
			END-J	1519.973	-275.725	34.413	-661.44	-4006.84	3757.38
9	TANGENT	3	END-I	-1422.272	169.613	-215.709	-467.85	-4211.24	9755.00
			END-J	-1422.272	169.613	-215.709	-467.85	-6976.56	7580.60
10	TANGENT	1	END-I	-8825.633	1208.751	-441.492	-578.33	24544.51	43560.29
			END-J	-8825.633	1208.751	-441.492	-578.33	17652.13	26689.80
10	TANGENT	2	END-I	1452.199	-106.535	40.438	-665.19	-4006.84	3756.72
			END-J	1452.199	-106.535	40.438	-665.19	-3375.54	5419.90
10	TANGENT	3	END-I	-1357.089	162.783	-78.489	-475.42	-6976.56	7580.13
			END-J	-1357.089	162.783	-78.489	-475.42	-8201.90	5038.83
11	TANGENT	1	END-I	-8359.575	1043.591	-460.091	-578.33	17652.13	24689.80
			END-J	-8359.575	1043.591	-460.091	-578.33	10465.40	8397.71
11	TANGENT	2	END-I	1376.925	13.565	46.263	-665.19	-3375.54	5419.90
			END-J	1376.925	13.565	46.263	-665.19	-2653.31	5208.13

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PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
11	TANGENT	3	END-I	-1285.533	150.773	36.375	-475.42	-8201.90	5038.83
			END-J	-1285.533	150.773	36.375	-475.42	-7634.02	2685.03
12	TANGENT	1	END-I	-7729.242	773.891	-440.132	-571.28	10469.40	8398.19
			END-J	-7729.242	773.891	-440.132	-571.28	-1270.16	-12243.69
12	TANGENT	2	END-I	1273.907	100.345	52.789	-660.82	-2653.31	5208.68
			END-J	1273.907	100.345	52.789	-660.82	-1245.26	2532.20
12	TANGENT	3	END-I	-1188.225	127.603	143.174	-473.17	-7634.02	2685.42
			END-J	-1188.225	127.603	143.174	-473.17	-3815.17	-718.12
13	TANGENT	1	END-I	-6934.960	366.261	-344.176	-579.13	-1270.16	-12243.32
			END-J	-6934.960	366.261	-344.176	-579.13	-10443.19	-22004.98
13	TANGENT	2	END-I	1141.813	100.275	57.100	-659.20	-1245.26	2532.63
			END-J	1141.813	100.275	57.100	-659.20	276.56	-139.91
13	TANGENT	3	END-I	-1064.858	82.913	181.652	-473.63	-3815.17	-717.82
			END-J	-1064.858	82.913	181.652	-473.63	1026.24	-2927.63
14	TANGENT	1	END-I	-6141.448	-62.739	-202.471	-569.47	-10443.19	-22005.23
			END-J	-6141.448	-62.739	-202.471	-569.47	-15838.94	-20333.28
14	TANGENT	2	END-I	1007.841	62.835	54.078	-659.14	276.56	-140.20
			END-J	1007.841	62.835	54.078	-659.14	1717.70	-1814.72
14	TANGENT	3	END-I	-941.189	24.553	147.867	-472.35	1026.24	-2927.84
			END-J	-941.189	24.553	147.867	-472.35	4966.81	-3582.17
15	TANGENT	1	END-I	-5348.640	237.569	-36.380	-567.42	-15838.94	-20333.34
			END-J	-5348.640	237.569	-36.380	-567.42	-16808.88	-26667.20
15	TANGENT	2	END-I	872.276	31.592	40.301	-658.96	1717.70	-1814.78
			END-J	872.276	31.592	40.301	-658.96	2792.17	-2657.07
15	TANGENT	3	END-I	-816.951	62.921	73.323	-471.98	4966.81	-3582.22
			END-J	-816.951	62.921	73.323	-471.98	6921.68	-5259.78
16	TANGENT	1	END-I	-4556.339	-155.721	118.387	-581.81	-16808.88	-26666.89
			END-J	-4556.339	-155.721	118.387	-581.81	-13653.62	-22516.60
16	TANGENT	2	END-I	735.427	.112	16.791	-660.39	2792.17	-2656.72
			END-J	735.427	.112	16.791	-660.39	3239.70	-2659.71
16	TANGENT	3	END-I	-692.266	-12.819	-11.988	-474.82	6921.68	-5259.52
			END-J	-692.266	-12.819	-11.988	-474.82	6602.18	-4917.87
17	TANGENT	1	END-I	-3764.784	-503.051	219.658	-571.93	-13653.62	-22516.85
			END-J	-3764.784	-503.051	219.658	-571.93	-7799.85	-9110.82

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PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
17	TANGENT	2	END-I	597.598	-23.498	-11.181	-659.22	3239.70	-2660.00
			END-J	597.598	-23.498	-11.181	-659.22	2941.72	-2033.80
17	TANGENT	3	END-I	-567.238	-86.199	-83.340	-472.67	6602.18	-4918.08
			END-J	-567.238	-86.199	-83.340	-472.67	4381.21	-2620.94
18	TANGENT	1	END-I	-3212.534	-692.851	241.332	-578.13	-7799.85	-9110.43
			END-J	-3212.534	-692.851	241.332	-578.13	-5255.43	-1805.55
18	TANGENT	2	END-I	500.918	-25.288	-30.602	-660.61	2941.72	-2033.35
			END-J	500.918	-25.288	-30.602	-660.61	2619.08	-1766.74
18	TANGENT	3	END-I	-479.851	-127.419	-108.672	-474.45	4381.21	-2620.61
			END-J	-479.851	-127.419	-108.672	-474.45	3235.46	-1277.21
19	TANGENT	1	END-I	-2981.153	-761.891	221.078	-567.09	-5255.43	-1809.05
			END-J	-2981.153	-761.891	221.078	-567.09	-4118.81	2108.04
19	TANGENT	2	END-I	460.318	-23.168	-35.128	-649.80	2619.08	-1770.75
			END-J	460.318	-23.168	-35.128	-649.80	2438.48	-1651.63
19	TANGENT	3	END-I	-442.230	-142.249	-117.082	-466.64	3235.46	-1280.09
			END-J	-442.230	-142.249	-117.082	-466.64	2633.51	-548.75
20	TANGENT	1	END-I	-2833.168	-801.741	234.244	-554.48	-4118.81	2111.39
			END-J	-2833.168	-801.741	234.244	-554.48	-3008.07	5913.11
20	TANGENT	2	END-I	434.372	-20.958	-42.169	-659.66	2438.48	-1647.72
			END-J	434.372	-20.958	-42.169	-659.66	2238.52	-1548.34
20	TANGENT	3	END-I	-419.641	-150.709	-116.332	-469.91	2633.51	-545.95
			END-J	-419.641	-150.709	-116.332	-469.91	2081.88	168.69
21	BEND	1	END-I	-2701.188	-834.391	230.051	-549.01	-3008.07	5913.62
			CENTER	-2719.656	-772.071	230.051	-612.55	-2518.66	7575.78
			END-J	-2736.687	-709.343	230.051	-664.82	-2027.92	9108.55
21	BEND	2	END-I	411.195	-18.278	-46.192	-661.09	2238.52	-1547.73
			CENTER	410.666	-27.726	-46.192	-610.55	2157.56	-1500.13
			END-J	409.920	-37.160	-46.192	-561.89	2075.45	-1433.00
21	BEND	3	END-I	-398.827	-157.539	-116.212	-469.75	2081.88	169.12
			CENTER	-402.343	-148.328	-116.212	-424.53	1851.68	485.59
			END-J	-405.647	-139.039	-116.212	-384.61	1620.50	782.92
22	BEND	1	END-I	-2598.946	-662.104	246.231	-723.88	-1649.22	9180.21
			CENTER	-2622.078	-563.564	246.231	-769.81	-784.52	11262.16
			END-J	-2641.476	-464.222	246.231	-783.09	81.29	13007.98
22	BEND	2	END-I	380.392	-45.888	-48.770	-496.46	2034.82	-1513.18
			CENTER	378.390	-60.209	-48.770	-422.45	1886.48	-1332.97
			END-J	375.848	-74.444	-48.770	-354.09	1735.45	-1104.24

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PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
22	BEND	3	END-I	-304.844	-139.967	-109.365	-332.50	1661.18	718.91
			CENTER	-389.852	-125.345	-109.365	-276.59	1301.14	1169.57
			END-J	-394.304	-110.546	-109.365	-234.31	939.24	1570.26
23	BEND	1	END-I	-2545.474	-470.028	-13.407	-691.79	-7213.63	10831.08
			CENTER	-2548.637	-452.562	-13.407	-741.27	-7216.99	11115.77
			END-J	-2551.680	-435.075	-13.407	-790.77	-7220.02	11389.67
23	BEND	2	END-I	352.046	-38.292	-91.056	-286.89	2066.22	70.25
			CENTER	351.775	-40.705	-91.056	-272.91	2011.95	94.63
			END-J	351.488	-43.117	-91.056	-259.30	1957.58	120.50
23	BEND	3	END-I	-381.798	-25.696	-142.838	-183.39	-97.94	1832.91
			CENTER	-381.965	-23.077	-142.838	-184.36	-184.83	1847.96
			END-J	-382.114	-20.457	-142.838	-185.92	-271.71	1861.40
24	BEND	1	END-I	-2472.951	-331.583	252.667	-726.79	1159.72	13438.95
			CENTER	-2481.238	-262.471	252.667	-685.31	1813.87	14184.79
			END-J	-2487.594	-193.155	252.667	-625.59	2466.62	14756.84
24	BEND	2	END-I	333.809	-91.349	-49.693	-222.99	1637.40	-1087.68
			CENTER	331.131	-100.625	-49.693	-178.97	1518.23	-846.65
			END-J	328.195	-109.823	-49.693	-138.29	1397.87	-582.43
24	BEND	3	END-I	-371.259	-99.827	-97.375	-159.57	913.89	1646.98
			CENTER	-373.899	-89.432	-97.375	-137.42	673.52	1884.60
			END-J	-376.248	-78.967	-97.375	-121.99	432.63	2096.02
25	BEND	1	END-I	-2303.688	-226.824	197.146	-647.22	1211.40	14911.53
			CENTER	-2312.442	-105.060	197.146	-557.78	2179.24	15699.42
			END-J	-2314.765	16.995	197.146	-417.44	3741.02	15908.49
25	BEND	2	END-I	290.672	-97.025	-60.746	-86.31	1445.64	-460.62
			CENTER	285.153	-112.214	-60.746	-17.53	1160.96	36.11
			END-J	278.840	-127.091	-60.746	36.10	872.05	604.22
25	BEND	3	END-I	-348.108	-73.701	-97.399	-122.24	255.13	2124.93
			CENTER	-351.510	-55.246	-97.399	-120.81	-200.91	2431.05
			END-J	-353.933	-36.638	-97.399	-143.42	-656.39	2649.18
26	BEND	1	END-I	-2133.339	32.919	200.664	39.55	1461.44	16154.97
			CENTER	-2131.594	92.321	200.664	87.24	1962.75	15997.98
			END-J	-2128.196	151.651	200.664	148.88	2462.53	15692.15
26	BEND	2	END-I	238.783	-111.815	-77.949	103.79	799.06	691.09
			CENTER	235.576	-118.421	-77.949	123.28	600.47	979.69
			END-J	232.187	-124.936	-77.949	137.24	401.42	1284.75
26	BEND	3	END-I	-329.865	-22.621	-82.774	-146.21	-922.15	2568.63
			CENTER	-330.367	-13.426	-82.774	-174.72	-1125.20	2613.81
			END-J	-330.613	-4.219	-82.774	-208.88	-1327.37	2635.93

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PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
27	BEND	1	END-I	-1945.849	110.087	135.942	278.03	4842.25	15126.31
			CENTER	-1935.766	226.397	135.942	589.41	5549.48	14218.88
			END-J	-1918.738	341.895	135.942	942.58	6236.79	12686.31
27	BEND	2	END-I	197.831	-111.455	-58.692	154.19	589.73	1207.89
			CENTER	190.802	-123.100	-58.692	179.74	263.16	1840.43
			END-J	183.089	-134.304	-58.692	185.70	-64.36	2534.60
27	BEND	3	END-I	-303.067	-26.296	-65.251	-243.18	-898.40	2808.45
			CENTER	-304.097	-8.102	-65.251	-307.08	-1233.85	2901.22
			END-J	-304.037	10.120	-65.251	-390.94	-1564.87	2895.78
28	BEND	1	END-I	-1765.704	382.548	-32.833	1303.59	9579.64	10356.62
			CENTER	-1761.261	402.511	-32.833	1411.75	9530.82	9956.71
			END-J	-1756.592	422.423	-32.833	1519.36	9480.78	9536.48
28	BEND	2	END-I	153.229	-130.406	-18.171	147.22	664.98	2449.27
			CENTER	151.743	-132.133	-18.171	154.63	644.76	2583.01
			END-J	150.238	-133.842	-18.171	161.81	624.45	2718.50
28	BEND	3	END-I	-282.198	2.251	-55.287	-558.59	-615.44	3208.80
			CENTER	-282.155	5.445	-55.287	-565.84	-665.40	3204.88
			END-J	-282.075	8.639	-55.287	-573.66	-715.28	3197.70
29	BEND	1	END-I	-1718.402	357.064	149.010	1605.82	4386.21	12701.21
			CENTER	-1714.208	376.681	149.010	1656.72	4520.85	12323.81
			END-J	-1709.791	396.249	149.010	1709.16	4654.90	11926.26
29	BEND	2	END-I	143.965	-103.246	-73.567	179.40	-620.65	2718.27
			CENTER	142.775	-104.885	-73.567	171.86	-698.33	2825.32
			END-J	141.567	-106.510	-73.567	163.43	-775.93	2934.05
29	BEND	3	END-I	-276.329	25.697	-39.606	-557.89	-2034.99	2571.69
			CENTER	-276.017	28.854	-39.606	-581.34	-2069.22	2543.64
			END-J	-275.669	32.007	-39.606	-605.19	-2103.18	2512.33
30	BEND	1	END-I	-1467.721	176.091	17.014	1849.30	6304.28	11120.30
			CENTER	-1429.056	378.168	17.014	2721.52	6199.07	7640.49
			END-J	-1362.709	572.919	17.014	3570.68	5973.77	1669.28
30	BEND	2	END-I	104.016	-54.034	-52.362	156.98	-343.65	3015.74
			CENTER	95.506	-67.952	-52.362	62.10	-1016.43	3781.61
			END-J	85.147	-80.555	-52.362	-125.27	-1669.51	4713.98
30	BEND	3	END-I	-236.873	-5.549	-6.772	-641.24	-1701.25	2792.13
			CENTER	-235.349	27.393	-6.772	-877.14	-1680.36	2654.98
			END-J	-229.266	59.804	-6.772	-1107.86	-1626.92	2107.53
31	BEND	1	END-I	-1084.748	396.608	-108.111	4563.17	5299.24	1522.41
			CENTER	-1052.129	476.447	-108.111	4918.75	4217.91	-1413.32
			END-J	-1013.643	553.629	-108.111	5192.65	3113.06	-4877.05

PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
31	BEND	2	END-I	61.804	-4.997	-28.780	-452.28	-1460.44	4763.10
			CENTER	61.259	-9.595	-28.780	-567.22	-1615.90	4812.17
			END-J	60.372	-14.139	-28.780	-693.44	-1762.35	4891.98
31	BEND	3	END-I	-183.617	48.472	50.055	-1393.68	-1332.54	2144.27
			CENTER	-179.488	62.038	50.055	-1476.66	-888.67	1772.67
			END-J	-174.358	75.258	50.055	-1526.30	-439.84	1310.99
32	TANGENT	1	END-I	-924.484	166.073	447.181	5475.81	5272.53	1629.80
			END-J	-924.484	166.073	447.181	5475.81	6927.27	1015.26
32	TANGENT	2	END-I	61.919	65.301	10.481	-864.43	-5119.87	-746.94
			END-J	61.919	65.301	10.481	-864.43	-5081.08	-988.58
32	TANGENT	3	END-I	-160.822	13.418	83.477	-1562.23	-1341.57	-37.20
			END-J	-160.822	13.418	83.477	-1562.23	-1032.68	-86.85
33	TANGENT	1	END-I	-902.169	175.906	316.091	5549.87	6868.08	1015.26
			END-J	-902.169	175.906	316.091	5549.87	9969.27	-710.56
33	TANGENT	2	END-I	66.906	59.732	37.041	-918.94	-5071.51	-988.58
			END-J	66.906	59.732	37.041	-918.94	-4708.10	-1574.61
33	TANGENT	3	END-I	-154.004	-4.898	71.097	-1573.23	-1015.84	-86.85
			END-J	-154.004	-4.898	71.097	-1573.23	-318.30	-38.80
34	TANGENT	1	END-I	-860.324	164.868	72.751	5486.79	10004.12	-710.56
			END-J	-860.324	164.868	72.751	5486.79	11346.39	-3752.38
34	TANGENT	2	END-I	75.601	46.021	83.681	-889.18	-4713.81	-1574.61
			END-J	75.601	46.021	83.681	-889.18	-3169.89	-2423.69
34	TANGENT	3	END-I	-139.772	-37.153	48.197	-1571.18	-328.24	-38.80
			END-J	-139.772	-37.153	48.197	-1571.18	561.00	646.67
35	TANGENT	1	END-I	-813.678	148.500	-125.809	5510.07	11335.10	-3752.38
			END-J	-813.678	148.500	-125.809	5510.07	9831.73	-5526.90
35	TANGENT	2	END-I	85.414	24.516	113.891	-895.69	-3168.06	-2423.69
			END-J	85.414	24.516	113.891	-895.69	-1807.10	-2716.65
35	TANGENT	3	END-I	-124.530	-48.831	28.657	-1570.03	564.23	646.67
			END-J	-124.530	-48.831	28.657	-1570.03	906.67	1230.18
36	TANGENT	1	END-I	-793.210	133.298	-197.129	5469.62	9854.29	-5526.90
			END-J	-793.210	133.298	-197.129	5469.62	9496.51	-5768.82
36	TANGENT	2	END-I	89.750	14.221	121.581	-888.25	-1810.77	-2716.65
			END-J	89.750	14.221	121.581	-888.25	-1590.10	-2742.47
36	TANGENT	3	END-I	-117.376	-49.010	21.017	-1573.74	900.21	1230.18
			END-J	-117.376	-49.010	21.017	-1573.74	938.35	1319.13

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PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
37	TANGENT	1	END-I	-758.615	115.043	-308.639	5494.00	9482.43	-5768.82
			END-J	-758.615	115.043	-308.639	5494.00	3128.27	-8137.29
37	TANGENT	2	END-I	96.958	-3.503	132.641	-892.34	-1587.82	-2742.47
			END-J	96.958	-3.503	132.641	-892.34	1142.95	-2670.35
37	TANGENT	3	END-I	-106.169	-46.921	8.857	-1571.33	942.40	1319.13
			END-J	-106.169	-46.921	8.857	-1571.33	1124.74	2285.12
38	TANGENT	1	END-I	-695.407	59.843	-420.399	5492.10	3131.61	-8137.29
			END-J	-695.407	59.843	-420.399	5492.10	-5518.61	-9368.63
38	TANGENT	2	END-I	110.062	-34.774	124.941	-893.03	1142.41	-2670.35
			END-J	110.062	-34.774	124.941	-893.03	3713.22	-1954.84
38	TANGENT	3	END-I	-85.263	-22.556	-8.593	-1572.01	1123.79	2285.12
			END-J	-85.263	-22.556	-8.593	-1572.01	946.98	2749.24
39	TANGENT	1	END-I	-662.910	2.036	-433.989	5681.11	-5323.83	-9368.63
			END-J	-662.910	2.036	-433.989	5681.11	-5652.96	-9370.17
39	TANGENT	2	END-I	118.334	-42.860	110.101	-1021.91	3679.84	-1954.84
			END-J	118.334	-42.860	110.101	-1021.91	3763.34	-1922.33
39	TANGENT	3	END-I	-74.185	-7.668	-15.603	-1604.06	891.61	2749.24
			END-J	-74.185	-7.668	-15.603	-1604.06	879.78	2755.05
40	TANGENT	1	END-I	-644.382	4.895	-440.609	5491.02	-5837.78	-9370.17
			END-J	-644.382	4.895	-440.609	5491.02	-10654.79	-9423.89
40	TANGENT	2	END-I	120.548	-53.297	101.801	-896.87	3795.08	-1922.33
			END-J	120.548	-53.297	101.801	-896.87	4908.03	-1339.65
40	TANGENT	3	END-I	-68.465	4.414	-19.403	-1574.08	932.35	2755.05
			END-J	-68.465	4.414	-19.403	-1574.08	720.23	2705.80
41	BEND	1	END-I	-602.021	-427.692	56.914	5482.98	-9027.08	10996.84
			CENTER	-638.359	-371.279	56.914	4662.08	-9022.55	14267.21
			END-J	-669.425	-311.800	56.914	3844.97	-8943.53	17063.22
41	BEND	2	END-I	129.044	80.137	61.249	-893.17	-1518.49	-4856.36
			CENTER	135.785	68.093	61.249	-1004.56	-930.77	-5463.10
			END-J	141.406	55.486	61.249	-1062.15	-335.36	-5968.94
41	BEND	3	END-I	-54.582	-27.987	-25.830	-1573.54	2678.57	-820.04
			CENTER	-56.897	-22.917	-25.830	-1333.50	2599.32	-611.68
			END-J	-58.742	-17.658	-25.830	-1101.64	2498.62	-445.59
42	BEND	1	END-I	-641.937	-191.144	110.068	2757.76	-9193.39	17140.60
			CENTER	-655.861	-135.885	110.068	2002.17	-8552.48	18393.80
			END-J	-665.038	-79.643	110.068	1303.79	-7849.66	19219.72

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PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
42	BEND	2	END-I	147.395	6.103	64.588	-1097.82	-256.81	-5966.38
			CENTER	147.380	-6.449	64.588	-1094.64	331.55	-5965.06
			END-J	146.298	-18.953	64.588	-1041.45	917.52	-5867.72
42	BEND	3	END-I	-47.485	-22.781	-46.827	-795.38	2608.48	-467.38
			CENTER	-49.250	-18.663	-46.827	-586.03	2308.41	-308.57
			END-J	-50.658	-14.409	-46.827	-402.94	1991.64	-181.84
43	BEND	1	END-I	-576.941	52.156	162.959	420.48	-8017.17	19190.18
			CENTER	-564.502	130.071	162.959	-536.81	-6007.00	18070.70
			END-J	-541.592	205.572	162.959	-1212.06	-3885.40	16008.73
43	BEND	2	END-I	132.348	-72.977	55.076	-933.87	1050.32	-5863.56
			CENTER	121.204	-90.284	55.076	-736.51	1841.03	-4860.59
			END-J	107.811	-105.917	55.076	-433.53	2597.60	-3655.26
43	BEND	3	END-I	-39.945	-24.422	-63.191	-176.69	2024.95	-174.32
			CENTER	-42.893	-18.767	-63.191	47.36	1257.38	91.01
			END-J	-45.045	-12.765	-63.191	165.03	466.47	284.72
44	BEND	1	END-I	-338.233	345.077	187.850	-1866.90	-3551.03	16023.41
			CENTER	-277.511	395.560	187.850	-2194.58	-445.85	10558.44
			END-J	-209.378	435.478	187.850	-2012.13	2671.24	4426.43
44	BEND	2	END-I	57.623	-147.549	16.114	25.61	2618.99	-3665.59
			CENTER	33.408	-151.412	16.114	471.21	2816.06	-1486.20
			END-J	8.300	-154.832	16.114	942.96	2937.92	773.49
44	BEND	3	END-I	-38.890	-23.913	-56.476	244.05	431.60	282.95
			CENTER	-42.266	-17.260	-56.476	243.21	-441.79	586.75
			END-J	-44.513	-10.145	-56.476	100.13	-1303.39	788.97
45	TANGENT	1	END-I	13.296	-432.471	-136.001	-1416.51	-3215.62	-4293.11
			END-J	13.296	-432.471	-136.001	-1416.51	-5154.68	1872.91
45	TANGENT	2	END-I	-43.453	130.062	18.341	1531.71	-2708.68	-660.12
			END-J	-43.453	130.062	18.341	1531.71	-2447.18	-2514.50
45	TANGENT	3	END-I	-44.857	10.021	30.195	-173.02	1261.17	-843.10
			END-J	-44.857	10.021	30.195	-173.02	1691.69	-985.98
46	TANGENT	1	END-I	107.714	-387.061	-97.616	-1415.36	-5154.68	1873.78
			END-J	107.714	-387.061	-97.616	-1415.36	-6919.17	8870.24
46	TANGENT	2	END-I	-57.711	103.902	44.926	1530.17	-2447.18	-2515.44
			END-J	-57.711	103.902	44.926	1530.17	-1635.10	-4393.57
46	TANGENT	3	END-I	44.278	11.901	9.128	-173.62	1691.69	-985.88
			END-J	-44.278	11.901	9.128	-173.62	1856.68	-1201.00
47	TANGENT	1	END-I	213.179	-316.241	-36.635	-1415.07	-6919.17	8870.28
			END-J	213.179	-316.241	-36.635	-1415.07	-7581.89	14591.03

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PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
47	TANGENT	2	END-I	-73.545	63.902	65.585	1530.02	-1635.10	-4393.62
			END-J	-73.545	63.902	65.585	1530.02	-448.68	-5549.60
47	TANGENT	3	END-I	-43.631	10.001	-13.044	-173.66	1856.68	-1201.00
			END-J	-43.631	10.001	-13.044	-173.66	1620.72	-1381.92
48	BEND	1	END-I	336.232	211.441	-60.852	-1417.23	6797.28	-14972.44
			CENTER	361.593	164.346	-60.852	-540.73	6190.20	-17254.94
			END-J	380.396	114.271	-60.852	246.25	5470.85	-18947.24
48	BEND	2	END-I	-91.936	-14.353	-74.471	1530.85	742.41	5517.76
			CENTER	-93.030	-1.870	-74.471	1555.94	-370.58	5616.30
			END-J	-92.438	10.647	-74.471	1431.26	-1476.84	5562.98
48	BEND	3	END-I	-42.833	-2.607	32.768	-173.46	-1545.14	1465.97
			CENTER	-42.795	3.172	32.768	-352.75	-1111.56	1462.53
			END-J	-41.981	8.893	32.768	-472.16	-657.82	1389.25
49	BEND	1	END-I	464.203	-121.823	-149.966	1225.20	5351.24	-18943.38
			CENTER	445.142	-179.373	-149.966	1782.37	3452.54	-17227.82
			END-J	418.977	-234.060	-149.966	2095.72	1498.74	-14872.97
49	BEND	2	END-I	-81.979	87.095	-61.129	1143.15	-1708.34	5563.37
			CENTER	-70.345	96.735	-61.129	874.76	-2532.41	4516.31
			END-J	-57.588	104.831	-61.129	504.63	-3316.07	3368.22
49	BEND	3	END-I	-35.251	23.638	36.862	-582.03	-565.13	1388.36
			CENTER	-31.990	27.894	36.862	-622.16	-69.00	1094.85
			END-J	-28.218	31.704	36.862	-599.42	428.23	755.39
50	BEND	1	END-I	381.341	-435.015	-211.422	2251.93	1318.65	-14867.19
			CENTER	317.963	-483.279	-211.422	2231.32	-1617.29	-9163.15
			END-J	248.555	-522.379	-211.422	1807.56	-4522.56	-2916.45
50	BEND	2	END-I	-12.645	152.038	-20.249	-24.11	-3394.08	3327.99
			CENTER	8.362	152.334	-20.249	-507.44	-3608.95	1437.37
			END-J	29.210	149.741	-20.249	-1015.71	-3755.38	-438.99
50	BEND	3	END-I	-15.960	38.294	22.256	-519.47	510.28	763.59
			CENTER	-10.547	40.123	22.256	-425.45	851.99	276.49
			END-J	-4.935	41.192	22.256	-285.38	1177.53	-228.60
51	BEND	1	END-I	124.434	-580.741	-198.591	939.79	-4804.61	-2873.85
			CENTER	52.515	-591.596	-198.591	211.43	-7068.16	3598.88
			END-J	-20.192	-593.579	-198.591	-788.14	-9225.71	10142.49
51	BEND	2	END-I	89.665	140.823	30.559	-1690.34	-3508.07	-404.32
			CENTER	106.206	128.807	30.559	-2085.85	-2938.97	-1893.00
			END-J	121.154	114.859	30.559	-2408.82	-2325.79	-3238.33
51	BEND	3	END-I	8.147	35.838	-5.512	-64.06	1207.79	-239.61
			CENTER	12.466	34.573	-5.512	80.33	1145.93	-628.36
			END-J	16.599	32.790	-5.512	216.08	1066.88	-1000.29

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PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
52	TANGENT	1	END-I	-105.639	-488.106	10.923	-2234.31	-5356.46	12446.73
			END-J	-105.639	-488.106	10.923	-2234.31	-5137.01	22253.07
52	TANGENT	2	END-I	159.008	82.316	50.011	-2743.86	-2835.90	-2475.36
			END-J	159.008	82.316	50.011	-2743.86	-1831.14	-4129.13
52	TANGENT	3	END-I	22.479	8.371	-32.513	381.70	654.84	-1269.25
			END-J	22.479	8.371	-32.513	381.70	1.64	-1437.44
53	TANGENT	1	END-I	-98.853	-237.767	16.615	-2221.40	-5056.98	22272.69
			END-J	-98.853	-237.767	16.615	-2221.40	-4723.01	27051.77
53	TANGENT	2	END-I	178.839	48.729	90.503	-2746.36	-1845.85	-4120.91
			END-J	178.839	48.729	90.503	-2746.36	-26.74	-5100.36
53	TANGENT	3	END-I	23.222	-9.969	-39.793	380.86	-3.53	-1437.66
			END-J	23.222	-9.969	-39.793	380.86	-803.36	-1237.28
54	TANGENT	1	END-I	-92.200	134.370	-2.363	-2230.27	-4726.35	27050.46
			END-J	-92.200	134.370	-2.363	-2230.27	-4775.36	24263.78
54	TANGENT	2	END-I	198.314	-2.445	116.719	-2746.18	-20.94	-5100.48
			END-J	198.314	-2.445	116.719	-2746.18	2399.67	-5049.77
54	TANGENT	3	END-I	23.820	-27.161	-34.603	379.60	-803.66	-1237.47
			END-J	23.820	-27.161	-34.603	379.60	-1521.28	-674.18
55	TANGENT	1	END-I	-86.058	591.586	-51.158	-2232.78	-4818.33	24255.05
			END-J	-86.058	591.586	-51.158	-2232.78	-5849.21	12334.02
55	TANGENT	2	END-I	216.986	-66.980	120.705	-2746.91	2405.76	-5046.48
			END-J	216.986	-66.980	120.705	-2746.91	4838.09	-3696.77
55	TANGENT	3	END-I	24.313	-40.782	-16.672	381.13	-1519.80	-676.64
			END-J	24.313	-40.782	-16.672	381.13	-1855.75	145.16
56	TANGENT	1	END-I	-80.295	1065.525	-129.076	-2232.12	-5849.46	12334.02
			END-J	-80.295	1065.525	-129.076	-2232.12	-8452.26	-9152.04
56	TANGENT	2	END-I	234.602	-138.594	100.230	-2747.45	4837.78	-3696.77
			END-J	234.602	-138.594	100.230	-2747.45	6858.90	-902.06
56	TANGENT	3	END-I	24.580	-49.470	9.867	381.34	-1855.71	145.16
			END-J	24.580	-49.470	9.867	381.34	-1656.74	1142.72
57	BEND	1	END-I	-390.034	-469.485	207.113	-2232.47	-6214.05	-10797.44
			CENTER	-444.756	-418.013	207.113	-2837.77	-3602.73	-5872.38
			END-J	-492.741	-360.207	207.113	-3117.67	-936.83	-1553.76
57	BEND	2	END-I	347.817	378.773	-25.761	-2742.63	6890.39	638.16
			CENTER	392.716	333.180	-25.761	-1892.92	6890.30	-3312.76
			END-J	429.681	282.533	-25.761	-1049.66	6785.82	-6729.57

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PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
57	BEND	3	END-I	38.723	28.289	22.901	379.68		
			CENTER	41.905	23.318	22.901	162.81	-1868.94	747.61
			END-J	44.453	17.993	22.901	-25.30	-1648.22	461.22
58	BEND	1	END-I	-429.223	-30.965	161.500	-3254.85	-67.35	-1553.42
			CENTER	-429.914	19.107	161.500	-3142.23	1999.14	-1491.22
			END-J	-424.784	68.920	161.500	-2790.23	4039.15	-1952.96
58	BEND	2	END-I	471.155	94.370	-101.903	806.81	6817.20	-6731.35
			CENTER	478.928	38.998	-101.903	1531.21	5611.90	-7430.91
			END-J	480.215	-16.903	-101.903	2110.67	4330.61	-7546.80
58	BEND	3	END-I	44.688	2.827	43.775	-400.25	-1344.37	232.34
			CENTER	44.714	-2.383	43.775	-527.04	-831.10	230.02
			END-J	44.134	-7.561	43.775	-593.35	-306.57	282.18
59	BEND	1	END-I	-257.857	77.916	72.733	-1662.79	4620.15	-1951.51
			CENTER	-245.211	111.502	72.733	-975.76	5670.37	-3089.66
			END-J	-228.212	143.109	72.733	-155.22	6619.93	-4619.54
59	BEND	2	END-I	425.733	-143.305	-148.634	3153.35	3650.93	-7542.58
			CENTER	402.904	-198.628	-148.634	3491.98	1421.08	-5488.02
			END-J	372.924	-250.424	-148.634	3531.17	-833.99	-2789.81
59	BEND	3	END-I	41.658	-4.990	40.262	-652.22	-144.77	281.65
			CENTER	40.625	-10.483	40.262	-633.52	424.92	374.62
			END-J	38.871	-15.791	40.262	-539.25	987.06	532.49
60	BEND	1	END-I	-179.157	-152.333	-68.660	1769.26	5961.58	-5149.47
			CENTER	-204.780	-115.619	-68.660	2755.03	4347.13	-2843.40
			END-J	-222.981	-74.714	-68.660	3416.98	2575.12	-1205.34
60	BEND	2	END-I	300.800	-200.119	-87.963	3137.47	-2053.93	-2624.01
			CENTER	257.423	-253.499	-87.963	2547.88	-4111.66	1279.96
			END-J	204.715	-297.691	-87.963	1579.00	-6020.36	6023.66
60	BEND	3	END-I	58.155	22.465	-11.590	-229.96	1142.55	436.25
			CENTER	61.358	11.036	-11.590	-28.16	967.75	147.93
			END-J	62.338	-7.792	-11.590	136.86	757.87	59.77
61	BEND	1	END-I	-502.561	-223.698	-191.869	4152.57	1031.28	-1205.17
			CENTER	-532.359	-145.661	-191.869	4065.64	-2186.36	1296.59
			END-J	-548.163	-64.343	-191.869	3498.11	-5354.74	2718.99
61	BEND	2	END-I	374.898	10.540	100.738	-903.99	-6136.34	6045.71
			CENTER	372.252	-45.690	100.738	-1710.11	-4574.96	6283.78
			END-J	361.221	-100.889	100.738	-2273.45	-2910.51	7276.60
61	BEND	3	END-I	147.494	46.117	-91.258	421.97	644.42	57.78
			CENTER	152.735	23.522	-91.258	421.15	-655.26	-413.91
			END-J	154.535	.398	-91.258	225.82	-1940.17	-575.92

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PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
62	BEND	1	END-I	-722.761	108.773	-232.433	1584.26	-6092.94	2944.34
			CENTER	-718.266	135.308	-232.433	1344.69	-6917.29	2539.83
			END-J	-712.798	161.660	-232.433	1074.93	-7732.25	2047.68
62	BEND	2	END-I	608.622	-53.924	239.409	-3111.87	-1764.82	7334.18
			CENTER	606.224	-76.295	239.409	-3160.13	-855.79	7549.99
			END-J	603.005	-98.562	239.409	-3174.89	54.40	7839.78
62	BEND	3	END-I	221.143	-29.029	-86.699	-407.25	-1929.38	-508.52
			CENTER	219.924	-37.151	-86.699	-483.29	-2200.35	-398.84
			END-J	218.407	-45.223	-86.699	-569.26	-2468.33	-262.33
63	TANGENT	1	END-I	-850.329	-162.450	309.653	426.38	6938.44	-4100.29
			END-J	-850.329	-162.450	309.653	426.38	13761.54	-520.77
63	TANGENT	2	END-I	865.676	-49.699	-351.901	-3181.98	-2443.71	-7446.36
			END-J	865.676	-49.699	-351.901	-3181.98	-10197.73	-6351.26
63	TANGENT	3	END-I	280.280	65.965	51.506	-770.55	2393.33	-404.66
			END-J	280.280	65.965	51.506	-770.55	3528.25	-1858.17
64	TANGENT	1	END-I	-1082.991	-129.464	272.869	422.15	13763.68	-464.78
			END-J	-1082.991	-129.464	272.869	422.15	19779.85	2389.62
64	TANGENT	2	END-I	1289.307	-246.238	-457.433	-3183.36	-10172.58	-6390.77
			END-J	1289.307	-246.238	-457.433	-3183.36	-20257.98	-961.77
64	TANGENT	3	END-I	382.156	.391	-56.736	-772.79	3535.60	-1843.21
			END-J	382.156	.391	-56.736	-772.79	2284.69	-1851.84
65	BEND	1	END-I	-1281.577	-173.541	-31.634	435.91	-7652.75	18395.00
			CENTER	-1291.987	-57.660	-31.634	-265.15	-7916.83	19331.94
			END-J	-1291.941	58.688	-31.634	-987.11	-8116.83	19327.78
65	BEND	2	END-I	1660.174	609.436	-219.851	-3199.00	6409.68	-19238.69
			CENTER	1708.228	457.766	-219.851	-2690.07	4892.97	-23563.50
			END-J	1742.456	302.390	-219.851	-2319.51	3336.65	-26644.01
65	BEND	3	END-I	470.844	243.690	-16.143	-768.99	1165.18	2701.36
			CENTER	490.840	200.388	-16.143	-667.04	1099.01	901.74
			END-J	506.863	155.464	-16.143	-571.44	1023.94	-540.34
66	BEND	1	END-I	-1390.199	420.444	212.397	-2553.67	-7646.42	19376.06
			CENTER	-1346.886	543.439	212.397	-3152.15	-5672.03	15477.84
			END-J	-1292.715	662.053	212.397	-3571.14	-3651.92	10602.50
66	BEND	2	END-I	2084.533	-115.434	-272.857	-1645.83	3575.39	-26663.16
			CENTER	2065.778	-301.934	-272.857	-1417.49	1506.02	-24975.21
			END-J	2030.371	-486.000	-272.857	-1375.68	-575.48	-21788.58
66	BEND	3	END-I	670.752	219.136	-41.709	-357.47	1113.84	-546.37
			CENTER	687.704	158.091	-41.709	-271.26	804.73	-2071.98
			END-J	699.111	95.773	-41.709	-213.12	489.13	-3098.68

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PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
67	BEND	1	END-I	-1221.523	1041.216	572.509	-4233.86	-2846.19	10605.48
			CENTER	-1122.923	1146.863	572.509	-4263.86	2180.51	1731.44
			END-J	-1015.220	1243.213	572.509	-3841.62	7189.53	-7961.83
67	BEND	2	END-I	2151.014	-1103.110	-278.084	-1462.71	-710.40	-21788.30
			CENTER	2043.080	-1292.107	-278.084	-1586.14	-228.62	-12074.19
			END-J	1918.584	-1470.630	-278.084	-1899.58	-4527.16	-869.55
67	BEND	3	END-I	911.759	94.510	-58.732	-110.13	518.65	-3099.25
			CENTER	916.564	12.121	-58.732	-84.46	51.03	-3531.71
			END-J	913.939	-70.366	-58.732	-100.95	-417.01	-3295.49
68	BEND	1	END-I	-785.882	1542.726	1039.461	-2321.53	7834.05	-7942.06
			CENTER	-644.271	1607.025	1039.461	-1231.72	16405.86	-20687.09
			END-J	-497.461	1658.357	1039.461	622.92	24845.30	-33900.01
68	BEND	2	END-I	1733.431	-2167.297	-249.361	-2768.40	-4052.25	-880.27
			CENTER	1531.949	-2314.107	-249.361	-3211.42	-5801.42	17253.11
			END-J	1318.105	-2442.244	-249.361	-3809.61	-7503.77	36499.03
68	BEND	3	END-I	1136.180	-168.916	-67.285	-182.10	-379.86	-3296.49
			CENTER	1116.438	-270.193	-67.285	-239.88	-905.41	-1519.70
			END-J	1087.687	-369.289	-67.285	-344.60	-1423.65	1067.87
69	TANGENT	1	END-I	-154.032	-1553.691	-1709.102	5606.73	-29166.48	29745.06
			END-J	-154.032	-1553.691	-1709.102	5606.73	-44507.38	43690.99
69	TANGENT	2	END-I	799.985	2907.202	661.198	-5240.83	12152.88	-35040.55
			END-J	799.985	2907.202	661.198	-5240.83	18087.79	-61135.60
69	TANGENT	3	END-I	1203.129	564.761	157.779	-623.86	1474.55	-849.94
			END-J	1203.129	564.761	157.779	-623.86	2890.77	-5919.24

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SUMMARY OF SUPPORT FORCES/MOMENTS IN GLOBAL/LOCAL SYSTEMS

BDRY- BOUNDARY ELEMENTS (SPRING)
 THAM- THERMAL ANCHOR MOTION
 SRAM- SEISMIC ANCHOR MOTION
 SNBR- SNUBBER ELEMENT

LOAD CASE 1

KIND OF SUPPORT	NODE NUMBER	FX	FY	GLOBAL COMPONENTS			LOCAL COMPONENTS		
				FZ	MX	MY	MZ	FL	ML
BDRY	7090	-11401.	0.	0.	0.	0.	0.	-11401.	0.
BDRY	7090	0.	1492.	0.	0.	0.	0.	1492.	0.
BDRY	7090	0.	0.	-25.5.	0.	0.	0.	0.	0.
BDRY	7090	0.	0.	0.	35394.	0.	0.	-2515.	0.
BDRY	7090	0.	0.	0.	0.	-128977.	0.	0.	35394.
BDRY	3047	0.	0.	0.	0.	0.	-245806.	0.	-128977.
BDRY	3116	0.	0.	0.	0.	0.	0.	0.	-245806.
BDRY	3210	0.	0.	0.	0.	0.	0.	0.	0.
BDRY	3210	-2014.	0.	0.	0.	0.	0.	0.	0.
BDRY	3250	0.	0.	0.	0.	0.	0.	-2014.	0.
BDRY	3250	-1861.	0.	0.	0.	0.	0.	0.	0.
BDRY	3250	0.	1554.	0.	0.	0.	0.	-1861.	0.
BDRY	3250	0.	0.	154.	0.	0.	0.	1554.	0.
BDRY	3250	0.	0.	0.	43691.	0.	0.	154.	0.
BDRY	3250	0.	0.	0.	0.	44507.	0.	0.	43691.
BDRY	3035	0.	0.	0.	0.	0.	-5607.	0.	44507.
BDRY	3083	0.	714.	0.	0.	0.	0.	0.	-5607.
BDRY	3083	0.	0.	62.	0.	0.	0.	714.	0.
								62.	0.

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SUMMARY OF SUPPORT FORCES/MOMENTS IN GLOBAL/LOCAL SYSTEMS

BDRY= BOUNDARY ELEMENTS (SPRING)
 THAM= THERMAL ANCHOR MOTION
 SEAM= SEISMIC ANCHOR MOTION
 SNBR= SNUBBER ELEMENT

LOAD CASE 2

KIND OF SUPPORT	NODE NUMBER	GLOBAL COMPONENTS						LOCAL COMPONENTS	
		FX	FY	FZ	MX	MY	MZ	FL	ML
BDRY	7090	1643.	0.	0.	0.	0.	0.	1643.	0.
BDRY	7090	0.	-1983.	0.	0.	0.	0.	-1983.	0.
BDRY	7090	0.	0.	409.	0.	0.	0.	409.	0.
BDRY	7090	0.	0.	0.	22396.	0.	0.	0.	22396.
BDRY	7090	0.	0.	0.	0.	19173.	0.	0.	19173.
BDRY	7090	0.	0.	0.	0.	0.	-11002.	0.	-11002.
BDRY	3047	0.	0.	0.	0.	0.	0.	0.	0.
BDRY	3116	0.	0.	0.	0.	0.	0.	0.	0.
BDRY	3210	610.	0.	0.	0.	0.	0.	610.	0.
BDRY	3210	0.	0.	0.	0.	0.	0.	0.	0.
BDRY	3250	661.	0.	0.	0.	0.	0.	661.	0.
BDRY	3250	0.	-3025.	0.	0.	0.	0.	-3025.	0.
BDRY	3250	0.	0.	-800.	0.	0.	0.	-800.	0.
BDRY	3250	0.	0.	0.	-61136.	0.	0.	0.	-61136.
BDRY	3250	0.	0.	0.	0.	-18088.	0.	0.	-18088.
BDRY	3250	0.	0.	0.	0.	0.	5241.	0.	5241.
BDRY	3035	0.	-4.	0.	0.	0.	0.	-4.	0.
BDRY	3083	0.	0.	-46.	0.	0.	0.	-46.	0.

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SUMMARY OF SUPPORT FORCES/MOMENTS IN GLOBAL/LOCAL SYSTEMS

BDRY- BOUNDARY ELEMENTS (SPRING)
 THAM- THERMAL ANCHOR MOTION
 SEAM- SEISMIC ANCHOR MOTION
 SNBR- SNUBBER ELEMENT

LOAD CASE 3

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KIND OF SUPPORT	NODE NUMBER	FX	FY	GLOBAL COMPONENTS			LOCAL COMPONENTS		
				FZ	MX	MY	MZ	FL	ML
BDRY	7090	-1396.	0.	0.	0.	0.	0.	-1396.	0.
BDRY	7090	0.	176.	0.	0.	0.	0.	176.	0.
BDRY	7090	0.	0.	-1702.	0.	0.	0.	-1702.	0.
BDRY	7090	0.	0.	0.	40695.	0.	0.	0.	40695.
BDRY	7090	0.	0.	0.	0.	25494.	0.	0.	25494.
BDRY	3047	0.	0.	0.	0.	0.	-31511.	0.	-31511.
BDRY	3116	0.	0.	0.	0.	0.	0.	0.	0.
BDRY	3210	90.	0.	0.	0.	0.	0.	90.	0.
BDRY	3210	0.	0.	0.	0.	0.	0.	0.	0.
BDRY	3250	158.	0.	0.	0.	0.	0.	158.	0.
BDRY	3250	0.	-565.	0.	0.	0.	0.	-565.	0.
BDRY	3250	0.	0.	-1279.	0.	0.	0.	-1279.	0.
BDRY	3250	0.	0.	0.	-5919.	0.	0.	0.	-5919.
BDRY	3250	0.	0.	0.	0.	-2891.	0.	0.	-2891.
BDRY	3035	0.	0.	0.	0.	0.	624.	0.	624.
BDRY	3083	0.	107.	0.	0.	0.	0.	107.	0.
		0.	0.	-73.	0.	0.	0.	-73.	0.

STATIC SOLUTION TIME LOG

EQUATION SOLUTION = .00
 DISPLACEMENT OUTPUT = .00
 STRESS RECOVERY = .00

BENCHMARK PROBLEM 1

TOTAL RESPONSE

***** FINAL RESULTS - SRSS COMBINATION OF DYNAMIC RESPONSES WITH HIGH FREQUENCY MODE RESPONSES *****
 MODAL COMBINATION METHOD 2-GROUPING

N O D E N O D E N U M B E R	D I S P L A C E M E N T S / R O T A T I O N S						A C C E L E R A T I O N S I N G ' S		
	X- T R A N S L A T I O N	Y- T R A N S L A T I O N	Z- T R A N S L A T I O N	X- R O T A T I O N	Y- R O T A T I O N	Z- R O T A T I O N	X- D I R E C T I O N	Y- D I R E C T I O N	Z- D I R E C T I O N
7090	.15392E-06	.12940E-06	.11262E-06	.94341E-07	.12369E-06	.76029E-07	.000	.000	.000
3001	.19674E-03	.19643E-03	.27083E-03	.13264E-04	.17068E-04	.93566E-05	.008	.009	.009
3005	.28370E-03	.27960E-03	.40696E-03	.23569E-04	.30078E-04	.15627E-04	.011	.013	.013
3010	.43255E-03	.41934E-03	.64733E-03	.43296E-04	.54743E-04	.26853E-04	.016	.019	.021
3011	.77642E-03	.73761E-03	.12221E-02	.98428E-04	.12275E-03	.55799E-04	.029	.035	.037
3012	.17428E-02	.15671E-02	.29669E-02	.18721E-03	.23020E-03	.96804E-04	.062	.074	.084
3019	.50200E-02	.43782E-02	.98657E-02	.37150E-03	.42997E-03	.15732E-03	.167	.215	.257
3021	.78511E-02	.72720E-02	.18432E-01	.53588E-03	.56315E-03	.18715E-03	.249	.305	.481
3023	.82421E-02	.77409E-02	.20039E-01	.56558E-03	.58354E-03	.19117E-03	.260	.417	.525
3024	.10025E-01	.97085E-02	.28050E-01	.70295E-03	.66536E-03	.21061E-03	.307	.561	.741
3026	.12478E-01	.11513E-01	.39048E-01	.86954E-03	.73764E-03	.25379E-03	.368	.719	1.021
3028	.15145E-01	.12408E-01	.50930E-01	.10356E-02	.78177E-03	.34044E-03	.430	.843	1.305
3030	.19919E-01	.13349E-01	.72024E-01	.13191E-02	.80095E-03	.60636E-03	.530	.946	1.764
3032	.24578E-01	.23420E-01	.92514E-01	.16036E-02	.76643E-03	.10081E-02	.610	.922	2.147
3035	.28768E-01	.50227E-01	.11101E+00	.18912E-02	.70695E-03	.15344E-02	.665	.874	2.420
3037	.32294E-01	.95227E-01	.12669E+00	.21829E-02	.65985E-03	.20673E-02	.692	.995	2.568
3038	.35107E-01	.15333E+00	.13933E+00	.24764E-02	.66101E-03	.24954E-02	.695	1.260	2.588
3040	.37290E-01	.22129E+00	.14941E+00	.27712E-02	.72179E-03	.28331E-02	.672	1.553	2.489
3044	.38031E-01	.25029E+00	.15292E+00	.28884E-02	.75880E-03	.29459E-02	.655	1.661	2.421
3047	.38367E-01	.26483E+00	.15456E+00	.29458E-02	.77869E-03	.29972E-02	.646	1.709	2.384
3050	.38678E-01	.27841E+00	.15606E+00	.29988E-02	.79782E-03	.30427E-02	.637	1.751	2.346
3053	.38939E-01	.29040E+00	.15709E+00	.30450E-02	.81520E-03	.30811E-02	.628	1.786	2.310
3056	.39391E-01	.31021E+00	.15693E+00	.31206E-02	.84563E-03	.31416E-02	.613	1.838	2.237
3059	.39504E-01	.31380E+00	.15657E+00	.31343E-02	.85143E-03	.31524E-02	.611	1.846	2.222
3062	.40235E-01	.32827E+00	.15423E+00	.31893E-02	.87579E-03	.31951E-02	.598	1.879	2.155
3065	.43819E-01	.35500E+00	.14631E+00	.32919E-02	.92434E-03	.32723E-02	.576	1.932	2.010
3068	.47824E-01	.36829E+00	.13978E+00	.33448E-02	.95145E-03	.33116E-02	.565	1.954	1.924
3071	.62226E-01	.39505E+00	.12164E+00	.34556E-02	.10122E-02	.33930E-02	.551	1.991	1.729
3074	.66052E-01	.39951E+00	.11730E+00	.34759E-02	.10241E-02	.34081E-02	.551	1.996	1.692
3077	.70162E-01	.40390E+00	.11278E+00	.34962E-02	.10363E-02	.34230E-02	.552	2.001	1.654
3080	.13653E+00	.4730E+00	.49316E-01	.37347E-02	.11912E-02	.35983E-02	.656	2.039	1.279
3083	.18280E+00	.45518E+00	.33635E-01	.38559E-02	.12788E-02	.36871E-02	.781	2.046	1.213
3086	.19613E+00	.45522E+00	.41015E-01	.38887E-02	.13032E-02	.37111E-02	.819	2.048	1.221
3089	.23210E+00	.45533E+00	.72378E-01	.39699E-02	.13705E-02	.37743E-02	.920	2.051	1.279
3092	.30176E+00	.45557E+00	.14367E+00	.41007E-02	.15052E-02	.38893E-02	1.095	2.057	1.488
3095	.34815E+00	.45572E+00	.19247E+00	.41697E-02	.15970E-02	.39602E-02	1.189	2.061	1.664
3098	.35528E+00	.45574E+00	.19999E+00	.41792E-02	.16111E-02	.39708E-02	1.202	2.061	1.692
3100	.43751E+00	.45601E+00	.28659E+00	.42680E-02	.17763E-02	.40857E-02	1.312	2.068	2.027
3101	.52209E+00	.45627E+00	.37485E+00	.43252E-02	.19472E-02	.41937E-02	1.373	2.073	2.369
3104	.52523E+00	.45629E+00	.37812E+00	.43268E-02	.19536E-02	.41975E-02	1.375	2.074	2.382
3107	.57112E+00	.45644E+00	.42544E+00	.43454E-02	.20463E-02	.42532E-02	1.395	2.076	2.563
3110	.64052E+00	.45104E+00	.49685E+00	.43613E-02	.21847E-02	.43369E-02	1.422	2.082	2.799
3113	.70198E+00	.42905E+00	.56150E+00	.43670E-02	.23067E-02	.44188E-02	1.453	2.084	2.904
3115	.78336E+00	.36674E+00	.65113E+00	.43657E-02	.24789E-02	.45626E-02	1.514	2.071	2.830
3116	.83197E+00	.26527E+00	.71821E+00	.43583E-02	.26419E-02	.47543E-02	1.556	2.025	2.378
3119	.83172E+00	.21964E+00	.73135E+00	.43546E-02	.27063E-02	.48493E-02	1.557	1.992	2.089
3120	.83138E+00	.18121E+00	.75037E+00	.43523E-02	.27718E-02	.49664E-02	1.559	1.948	1.822
3122	.83104E+00	.18112E+00	.77213E+00	.43529E-02	.28189E-02	.50779E-02	1.561	1.909	1.745
3123	.81389E+00	.24217E+00	.79182E+00	.43566E-02	.28566E-02	.52151E-02	1.555	1.884	1.969
3125	.74905E+00	.31944E+00	.77245E+00	.43564E-02	.28757E-02	.53181E-02	1.522	1.893	2.320
3128	.63779E+00	.38137E+00	.71539E+00	.43369E-02	.28864E-02	.53848E-02	1.452	1.915	2.596
3198	.52010E+00	.39438E+00	.63923E+00	.42867E-02	.28907E-02	.53955E-02	1.331	1.921	2.577
3199	.41314E+00	.37834E+00	.56186E+00	.42053E-02	.28930E-02	.53611E-02	1.165	1.911	2.398
3200	.30703E+00	.36234E+00	.48911E+00	.40903E-02	.28950E-02	.52827E-02	.944	1.897	2.248
3205	.19949E+00	.34581E+00	.42112E+00	.39341E-02	.28953E-02	.51546E-02	.671	1.875	2.155
3208	.97840E-01	.33010E+00	.36452E+00	.37438E-02	.28923E-02	.49849E-02	.384	1.846	2.160
3210	.33116E-02	.31481E+00	.32190E+00	.35149E-02	.28848E-02	.47732E-02	.282	1.804	2.273
3212	.99789E-01	.28652E+00	.28731E+00	.32170E-02	.28753E-02	.44885E-02	.692	1.696	2.468

3215	.16415E+00	.22245E+00	.25267E+00	.28731E-02	.28580E-02	.41481E-02	1.018		
3220	.18996E+00	.13318E+00	.21390E+00	.24414E-02	.27582E-02	.36581E-02	1.146	1.404	2.570
3222	.15398E+00	.38425E-01	.15673E+00	.19268E-02	.23702E-02	.28110E-02	1.005	.993	2.585
3225	.97028E-01	.28219E-01	.10865E+00	.16783E-02	.18890E-02	.21174E-02	.872	.630	2.356
3230	.83986E-01	.27651E-01	.97868E-01	.16248E-02	.17666E-02	.19581E-02	.845	.599	1.869
3235	.48147E-01	.25336E-01	.65712E-01	.14316E-02	.13775E-02	.14845E-02	.732	.592	1.713
3237	.22201E-01	.24079E-01	.37794E-01	.12025E-02	.10066E-02	.10921E-02	.570	.558	1.193
3238	.10371E-01	.21992E-01	.20655E-01	.10020E-02	.74702E-03	.84596E-03	.425	.518	.713
3240	.52573E-02	.15157E-01	.83722E-02	.76949E-03	.50416E-03	.60818E-03	.258	.464	.404
3243	.27001E-02	.69871E-02	.18507E-02	.49974E-03	.28783E-03	.36649E-03	.110	.328	.172
3245	.55624E-03	.12048E-02	.65866E-04	.19036E-03	.98694E-04	.12743E-03	.019	.162	.041
3250	.12394E-06	.24570E-06	.16634E-06	.16604E-06	.84290E-07	.82505E-07	.000	.033	.001
								.000	.000

***** FINAL RESULTS - SRSS COMBINATION OF DYNAMIC RESPONSES WITH HIGH FREQUENCY MODE RESPONSES *****
 MODAL COMBINATION METHOD 2-GROUPING

PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
1	TANGENT	END-I	15859.611	12330.420	11344.831	401736.02	1439007.51	876300.06
		END-J	15859.611	12330.420	11344.831	401736.02	1254657.70	655143.55
2	TANGENT	END-I	15752.811	12277.653	11306.604	401644.88	1254669.00	655177.82
		END-J	15752.811	12277.653	11306.604	401644.88	1211893.95	603367.87
3	TANGENT	END-I	15578.769	12196.223	11244.992	401644.88	1211893.95	603367.87
		END-J	15578.769	12196.223	11244.992	401644.88	1169819.87	552339.86
4	TANGENT	END-I	15474.235	12153.712	11187.027	402860.43	1170547.69	549896.11
		END-J	15474.235	12153.712	11187.027	402860.43	1123443.96	492672.11
5	TANGENT	END-I	15353.658	12100.958	11150.141	402589.13	1123194.41	493464.87
		END-J	15353.658	12100.958	11150.141	402589.13	1046708.59	401140.30
6	BEND	END-I	15124.103	12512.303	10414.619	402098.62	1015863.60	471986.52
		CENTER	15192.463	12424.465	10414.619	418733.84	931728.07	384446.12
		END-J	15207.647	12405.785	10414.619	452725.76	839910.99	310250.70
7	BEND	END-I	14774.062	12413.072	10272.435	513316.29	798986.48	322670.11
		CENTER	14670.999	12534.748	10272.435	553861.18	707395.23	275403.13
		END-J	14536.274	12690.713	10272.435	592393.80	613910.67	256146.36
8	BEND	END-I	14120.986	12819.966	10224.048	617372.40	542838.95	304160.01
		CENTER	14089.719	12854.941	10224.048	642854.59	527326.86	301209.69
		END-J	14057.789	12890.409	10224.048	648177.62	512012.05	299258.79
9	TANGENT	END-I	13842.783	12708.645	10383.302	654724.92	560163.96	171434.31
		END-J	13842.783	12708.645	10383.302	654724.92	446251.14	318834.42
10	TANGENT	END-I	13533.090	12660.635	10046.494	654664.57	446251.14	318957.81
		END-J	13533.090	12660.635	10046.494	654664.57	329773.35	511035.32
11	TANGENT	END-I	13201.922	12609.770	9538.784	654664.57	329773.35	511035.32
		END-J	13201.922	12609.770	9538.784	654664.57	259664.55	705744.39
12	TANGENT	END-I	12769.262	12564.507	8665.829	654759.95	259664.55	705656.61
		END-J	12769.262	12564.507	8665.829	654759.95	296875.04	1039192.96
13	TANGENT	END-I	12250.626	12590.501	7200.651	654861.76	296875.04	1039129.06
		END-J	12250.626	12590.501	7200.651	654861.76	425440.32	1373126.06
14	TANGENT	END-I	11765.482	12747.733	5511.871	654772.45	425440.32	1373168.56
		END-J	11765.482	12747.733	5511.871	654772.45	540703.19	1710180.10
15	TANGENT	END-I	11318.901	16434.368	3910.664	654747.55	540703.19	1710189.60
		END-J	11318.901	16434.368	3910.664	654747.55	613882.76	1407412.90
16	TANGENT	END-I	10916.031	15786.973	3144.597	654846.86	613882.76	1407366.80
		END-J	10916.031	15786.973	3144.597	654846.86	638924.44	1193627.69
17	TANGENT	END-I	10560.335	14880.574	3928.847	654794.75	638924.44	1193656.39
		END-J	10560.335	14880.574	3928.847	654794.75	621220.58	1101204.69
18	TANGENT	END-I	10344.003	14067.872	5008.891	654829.26	621220.58	1101183.78
		END-J	10344.003	14067.872	5008.891	654829.26	605996.59	1100164.44
19	TANGENT	END-I	10253.627	13700.261	5532.371	654708.73	605996.59	1100237.96

		END-J	10253.627	13700.261	5532.371	654708.73	597706.07	1106323.68
20	TANGENT	END-I	10213.426	13461.558	5821.431	654743.34	597706.07	1106301.48
		END-J	10213.426	13461.558	5821.431	654743.34	589942.99	1115472.96
21	BEND	END-I	10171.281	13241.167	6114.309	654740.63	589942.99	1115474.26
		CENTER	10365.870	13089.361	6114.309	652623.11	588758.35	1120268.53
		END-J	10559.996	12933.269	6114.309	650440.80	587900.59	1125368.85
22	BEND	END-I	10758.372	12439.806	6479.488	647299.98	586451.40	1127968.60
		CENTER	11064.228	12168.652	6479.488	643382.46	584372.42	1136005.11
		END-J	11365.157	11888.514	6479.488	639278.52	583296.94	1144525.43
23	BEND	END-I	11630.754	10319.014	8248.750	634053.17	844729.93	971145.03
		CENTER	11670.728	10273.879	8248.750	633590.12	845707.31	971533.05
		END-J	11710.481	10228.669	8248.750	633159.67	846682.49	971934.83
24	BEND	END-I	11827.302	10916.176	6992.122	630068.38	587191.44	1149290.87
		CENTER	12024.491	10698.168	6992.122	626567.72	586460.56	1134280.51
		END-J	12216.573	10478.254	6992.122	622962.84	586369.51	1159293.07
25	BEND	END-I	12269.739	9926.240	7401.817	619065.56	599759.82	1154458.25
		CENTER	12582.896	9526.201	7401.817	612372.97	600120.01	1161185.78
		END-J	12874.320	9129.274	7401.817	605533.06	602613.47	1167463.46
26	BEND	END-I	12986.301	8437.435	7759.328	594065.43	635642.85	1155757.87
		CENTER	13101.239	8258.076	7759.328	590831.75	636341.71	1156993.08
		END-J	13209.132	8084.789	7759.328	587681.67	637513.96	1157978.94
27	BEND	END-I	13041.264	7541.773	8343.169	583418.64	614554.12	1172550.96
		CENTER	13213.000	7236.595	8343.169	574883.41	620885.58	1170350.72
		END-J	13349.776	6980.978	8343.169	566439.05	630292.40	1166457.54
28	BEND	END-I	13185.406	6593.699	8742.855	558628.82	705637.51	1126467.84
		CENTER	13195.693	6572.869	8742.855	556293.40	708611.60	1124134.53
		END-J	13204.662	6554.601	8742.855	553976.10	711675.69	1121727.19
29	BEND	END-I	13113.710	6785.337	8644.888	551970.05	656031.41	1155959.34
		CENTER	13118.593	6775.753	8644.888	551048.82	656963.49	1154220.75
		END-J	13122.159	6768.424	8644.888	550159.51	657984.08	1152417.89
30	BEND	END-I	12481.993	6524.603	9511.062	547521.52	650351.67	1158069.69
		CENTER	12338.668	6789.736	9511.062	533534.27	683032.15	1119802.30
		END-J	12025.860	7329.614	9511.062	526017.00	728923.71	1071785.04
31	BEND	END-I	10278.536	8356.659	10327.327	531632.30	735035.96	1064816.40
		CENTER	9942.545	8755.499	10327.327	537398.64	760997.32	1024925.40
		END-J	9581.057	9150.385	10327.327	547153.31	788672.74	983861.02
32	TANGENT	END-I	8601.462	10133.580	9469.339	565510.83	926224.33	843585.81
		END-J	8601.462	10133.580	9469.339	565510.83	899990.40	811698.64
33	TANGENT	END-I	8230.617	9946.536	9441.833	567099.28	898986.72	811698.64
		END-J	8230.617	9946.536	9441.833	567099.28	832742.85	730495.14
34	TANGENT	END-I	7546.782	9455.023	9370.280	566305.16	833285.35	730495.14
		END-J	7546.782	9455.023	9370.280	566305.16	724883.36	596039.19
35	TANGENT	END-I	6872.708	8802.822	9254.301	566464.78	724757.89	596039.19
		END-J	6872.708	8802.822	9254.301	566464.78	669877.90	524105.93
36	TANGENT	END-I	6614.793	8455.805	9193.142	566272.80	670041.42	524105.93
		END-J	6614.793	8455.805	9193.142	566272.80	662977.19	514405.35
37	TANGENT	END-I	6223.483	7910.177	9107.102	566380.23	662884.60	514405.35
		END-J	6223.483	7910.177	9107.102	566380.23	610598.12	427658.17

38	TANGENT	END-I	5733.532	6692.696	8907.408	566388.11	610590.73	427658.17
		END-J	5733.532	6622.696	8907.408	566388.11	615175.29	383064.04
39	TANGENT	END-I	5722.840	5861.862	8787.428	568887.65	612862.92	383064.04
		END-J	5722.840	5861.862	8787.428	568887.65	614059.78	382149.96
40	TANGENT	END-I	5584.732	5588.658	8732.039	566442.01	616318.34	382149.96
		END-J	5584.732	5588.658	8732.039	566442.01	642230.75	371444.74
41	BEND	END-I	5631.226	8609.249	4685.517	566383.63	374705.61	640430.76
		CENTER	5770.210	8516.800	4685.517	544655.41	397562.78	668928.66
		END-J	5960.392	8384.802	4685.517	519079.80	427245.96	700627.69
42	BEND	END-I	6733.558	7782.183	3795.235	480740.32	469351.17	701045.03
		CENTER	7005.002	7538.651	3795.235	451210.95	490990.13	727327.86
		END-J	7274.020	7279.475	3795.235	420187.31	512946.85	753658.78
43	BEND	END-I	8327.061	6406.975	3270.039	377965.03	545589.08	753095.39
		CENTER	8625.452	5999.319	3270.039	328152.37	554277.04	777520.63
		END-J	8833.892	5687.917	3270.039	284161.76	557587.18	795851.07
44	BEND	END-I	9633.191	5593.163	4001.044	243579.38	575367.08	796652.54
		CENTER	9371.165	6021.539	4001.044	231832.39	527110.90	770031.45
		END-J	8950.164	6631.234	4001.044	243036.18	470862.55	731744.52
45	TANGENT	END-I	8343.544	8548.243	4818.349	278636.16	441134.84	737593.17
		END-J	8343.544	8548.243	4818.349	278636.16	381339.25	660790.07
46	TANGENT	END-I	8534.790	9320.128	5404.376	278775.45	381339.25	660731.28
		END-J	8534.790	9320.128	5404.376	270775.45	298041.50	573310.42
47	TANGENT	END-I	8842.584	10167.425	5876.695	278780.94	298041.50	573307.72
		END-J	8842.584	10167.425	5876.695	278780.94	218769.79	518457.62
48	BEND	END-I	9317.221	11309.086	5899.875	278767.06	215126.15	520010.75
		CENTER	8495.317	11938.832	5899.875	274395.77	187619.51	509580.19
		END-J	7750.706	12435.233	5899.875	260766.77	206716.43	528040.80
49	BEND	END-I	7874.700	13772.034	5895.040	234118.62	236494.40	528031.07
		CENTER	7735.405	13851.327	5895.040	210516.68	284688.11	560854.52
		END-J	7866.627	13778.623	5895.040	181708.38	343474.54	622834.87
50	BEND	END-I	9636.470	14107.281	5907.961	146039.29	363549.39	620818.34
		CENTER	10312.312	13620.488	5907.961	125528.38	415549.49	692225.40
		END-J	11082.827	13001.227	5907.961	128236.48	466234.05	778246.02
51	BEND	END-I	13370.482	12513.528	6092.317	170864.06	447815.95	780870.23
		CENTER	13969.608	11841.639	6092.317	213247.62	467525.18	832832.66
		END-J	14485.830	11203.972	6092.317	263713.57	485020.30	893450.92
52	TANGENT	END-I	15933.560	10703.855	7251.654	330805.95	315927.42	935886.51
		END-J	15933.560	10703.855	7251.654	330805.95	381930.44	1002565.33
53	TANGENT	END-I	16865.954	11160.444	7991.029	330457.70	381329.00	1002905.85
		END-J	16865.954	11160.444	7991.029	330457.70	483313.45	1099655.82
54	TANGENT	END-I	17847.756	11578.812	8768.146	331127.42	482906.80	1099633.09
		END-J	17847.756	11578.812	8768.146	331127.42	619778.81	1228253.15
55	TANGENT	END-I	18857.161	11932.232	9525.517	330878.46	620108.05	1228153.99
		END-J	18857.161	11932.232	9525.517	330878.46	778132.64	1377842.27
56	TANGENT	END-I	19876.162	12199.412	10255.907	330816.46	778159.04	1377842.27
		END-J	19876.162	12199.412	10255.907	330816.46	956888.45	1547652.25

57	BEND	END-I	18742.427	17795.650	10474.904	331538.48	975236.23	1536000.27
		CENTER	16871.265	19578.513	10474.904	431084.73	1034077.85	1519971.52
		END-J	14865.649	21141.765	10474.904	543001.27	1083974.85	1522482.98
58	BEND	END-I	11167.991	24061.005	11374.987	789744.62	919799.95	1572523.59
		CENTER	9420.915	24797.438	11374.987	888680.03	935830.63	1532356.86
		END-J	8184.370	25232.901	11374.987	987997.27	946332.28	1578055.68
59	BEND	END-I	8122.671	25730.518	12340.475	1177902.78	696175.62	1577919.46
		CENTER	9709.248	25175.633	12340.475	1256386.09	694793.72	1653060.84
		END-J	11900.397	24214.823	12340.475	1330288.70	696783.65	1764448.53
60	BEND	END-I	16460.227	21781.264	13376.470	1434313.34	424563.06	1769447.99
		CENTER	19786.829	18810.767	13376.470	1457509.03	477660.36	1911364.15
		END-J	22569.716	15361.366	13376.470	1470143.23	551460.80	2045870.52
61	BEND	END-I	25823.073	8530.365	14496.907	1386901.48	735974.29	2045937.99
		CENTER	26253.982	7094.182	14496.907	1319543.04	794430.25	2023166.12
		END-J	26135.903	7517.552	14496.907	1255579.45	843824.54	1962865.16
62	BEND	END-I	24065.773	12393.029	15151.323	1086082.49	1051596.70	1963650.07
		CENTER	23683.779	13108.373	15151.323	1063800.25	1049691.35	1923456.74
		END-J	23272.861	13824.671	15151.323	1042695.94	1046858.27	1881316.37
63	TANGENT	END-I	22310.886	14167.872	16623.390	996359.47	1164680.89	1836627.52
		END-J	22310.886	14167.872	16623.390	996359.47	1002065.71	1551691.50
64	TANGENT	END-I	22416.695	14191.027	17017.832	996268.98	1000811.20	1552559.12
		END-J	22416.695	14191.027	17017.832	996268.98	968885.27	1281714.13
65	BEND	END-I	22539.229	16322.825	15247.826	996282.53	1282250.79	968160.94
		CENTER	22573.897	16275.775	15247.826	1005985.35	1171776.68	1001353.37
		END-J	22520.740	16350.741	15247.826	1021381.57	1055814.97	1047552.51
66	BEND	END-I	22177.206	17076.174	15260.675	1058756.72	1018815.08	1047075.43
		CENTER	21860.037	17481.173	15260.675	1074095.49	895812.48	1099341.98
		END-J	21473.482	17954.150	15260.675	1085915.16	778571.33	1163181.75
67	BEND	END-I	20439.731	19274.914	15300.257	1095605.96	765235.43	1162944.12
		CENTER	19895.931	19835.188	15300.257	1090935.19	685253.87	1230829.41
		END-J	19335.475	20380.802	15300.257	1077757.73	639891.34	1310989.81
68	BEND	END-I	18140.632	21579.970	15296.445	1023677.09	721733.90	1311831.78
		CENTER	17650.119	21981.574	15296.445	988950.41	747630.09	1393683.08
		END-J	17227.690	22314.118	15296.445	944805.95	807390.11	1487225.95
69	TANGENT	END-I	16629.102	24555.411	12372.285	825046.53	821857.14	1549266.69
		END-J	16629.102	24555.411	12372.285	825046.53	842898.41	1660453.81

***** FINAL RESULTS - SRSS COMBINATION OF DYNAMIC RESPONSES WITH HIGH FREQUENCY MODE RESPONSES *****
 MODAL COMBINATION METHOD 2-GROUPING

SUPPORT FORCES AND MOMENTS

NODE NUMBER	COMPONENT DIRECTION	FORCE/MOMENT (LOCAL)
7090	FX	15393.
7090	FY	12940.
7090	FZ	11262.
7090	MX	943413.
7090	MY	1236836.
7090	MZ	760286.
3047	FZ	93.
3116	FZ	431.
3210	FX	16558.
3210	FZ	193.
3250	FX	12394.
3250	FY	24570.
3250	FZ	16635.
3250	MX	1660454.
3250	MY	842898.
3250	MZ	825047.
3035	FY	27701.
3083	FZ	10550.

BENCHMARK PROBLEM 2
INDEPENDENT SUPPORT MOTION RESPONSE
SPECTRUM METHOD

AP600 PRESSURIZER SURGE LINE BENCHMARK ANALYSIS - MULTIPLE SUPPORT EXCIT

CONTROL INFORMATION

NUMBER OF NODAL POINTS	=	70
NUMBER OF ELEMENT TYPES	=	3
NUMBER OF STATIC LOAD CASES	=	0
NUMBER OF DYNAMIC LOAD CASES	=	1
NUMBER OF ANCHOR MVMT CASES	=	0
NUMBER OF FREQUENCIES	=	20
SOLUTION MODE (MODEX)	=	0
EQ.0, EXECUTION		
EQ.1, DATA CHECK		
STRESS CALCULATION FLAG	=	0
EQ.0 NO		
EQ.1 YES		
ASME CODE EVALUATION FLAG	=	0
EQ.1 CLASS 1 PIPING		
EQ.2 CLASS2 OR CLASS 3 PIPING		
ACCELERATION DUE TO GRAVITY	=	-386.4
BANDWIDTH MINIMIZATION FLAG	=	0
EQ.0 NO		
EQ.1 YES		
ARBITRARY NODE NUMBERING FLAG	=	1
EQ.0 NO		
EQ.1 YES		
NUMBER OF SUPPORT GROUPS	=	3
FLAG FOR NODAL COORD. INPUT UNITS	=	0
EQ.0 CONSISTENT UNIT		
EQ.1 FEET TO INCHES		

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LIST OF ANALYSIS TO BE PERFORMED

LOAD CASE	DISK FILE	ANALYSIS TYPE
1	0	INDEPENDENT RESPONSE SPECT.ANAL

MODAL POINT INPUT DATA

NEW NODE	OLD NODE	BOUNDARY CONDITION CODES						MODAL POINT COORDINATES			
		X	Y	Z	XX	YY	ZZ	X	Y	Z	T
1	7090	0	0	0	0	0	0	11910.000	12283.416	1251.372	653.000
2	3001	0	0	0	0	0	0	11923.164	12272.496	1259.028	653.000
3	3005	0	0	0	0	0	0	11926.320	12269.880	1260.864	653.000
4	3010	0	0	0	0	0	0	11929.476	12267.264	1262.700	653.000
5	3011	0	0	0	0	0	0	11933.088	12264.288	1264.764	653.000
6	3012	0	0	0	0	0	0	11939.124	12259.296	1268.232	653.000
7	3019	0	0	0	0	0	0	11953.932	12251.028	1275.132	653.000
8	3021	0	0	0	0	0	0	11968.632	12248.256	1279.728	653.000
9	3023	0	0	0	0	0	0	11971.320	12248.195	1280.388	653.000
10	3024	0	0	0	0	0	0	11983.812	12248.195	1283.268	653.000
11	3026	0	0	0	0	0	0	11999.028	12248.195	1286.760	653.000
12	3028	0	0	0	0	0	0	12014.244	12248.195	1290.252	653.000
13	3030	0	0	0	0	0	0	12040.236	12248.195	1296.240	653.000
14	3032	0	0	0	0	0	0	12066.204	12248.195	1302.240	653.000
15	3035	0	0	0	0	0	0	12092.172	12248.195	1308.228	653.000
16	3037	0	0	0	0	0	0	12118.152	12248.195	1314.216	653.000
17	3038	0	0	0	0	0	0	12144.120	12248.195	1320.216	653.000
18	3040	0	0	0	0	0	0	12170.088	12248.195	1326.204	653.000
19	3044	0	0	0	0	0	0	12180.360	12248.195	1328.580	653.000
20	3047	0	0	0	0	0	0	12185.376	12248.195	1329.708	653.000
21	3050	0	0	0	0	0	0	12189.996	12248.195	1330.776	653.000
22	3053	0	0	0	0	0	0	12194.028	12248.352	1331.712	653.000
23	3056	0	0	0	0	0	0	12200.557	12249.288	1333.248	653.000
24	3059	0	0	0	0	0	0	12201.744	12249.553	1333.524	653.000
25	3062	0	0	0	0	0	0	12206.364	12250.884	1334.664	653.000
26	3065	0	0	0	0	0	0	12214.801	12254.628	1335.728	653.000
27	3068	0	0	0	0	0	0	12218.928	12257.195	1337.796	653.000
28	3071	0	0	0	0	0	0	12226.979	12263.939	1339.944	653.000
29	3074	0	0	0	0	0	0	12228.288	12265.332	1340.292	653.000
30	3077	0	0	0	0	0	0	12229.668	12266.893	1340.676	653.000
31	3080	0	0	0	0	0	0	12240.660	12288.636	1344.168	653.000
32	3083	0	0	0	0	0	0	12242.292	12301.824	1345.116	653.000
33	3086	0	0	0	0	0	0	12242.292	12305.520	1345.296	653.000
34	3089	0	0	0	0	0	0	12242.292	12315.324	1345.668	653.000
35	3092	0	0	0	0	0	0	12242.292	12333.756	1346.484	653.000
36	3095	0	0	0	0	0	0	12242.292	12345.695	1346.988	653.000
37	3098	0	0	0	0	0	0	12242.292	12347.508	1347.072	653.000
38	3100	0	0	0	0	0	0	12242.292	12368.076	1347.972	653.000
39	3101	0	0	0	0	0	0	12242.292	12388.632	1348.884	653.000
40	3104	0	0	0	0	0	0	12242.292	12389.388	1348.944	653.000
41	3107	0	0	0	0	0	0	12242.292	12400.309	1349.448	653.000
42	3110	0	0	0	0	0	0	12239.855	12416.316	1350.264	653.000
43	3113	0	0	0	0	0	0	12233.340	12430.033	1351.152	653.000
44	3115	0	0	0	0	0	0	12215.976	12446.592	1352.640	653.000
45	3116	0	0	0	0	0	0	12188.364	12454.176	1354.188	653.000
46	3119	0	0	0	0	0	0	12174.120	12454.176	1354.812	653.000
47	3120	0	0	0	0	0	0	12156.061	12454.176	1355.592	653.000
48	3122	0	0	0	0	0	0	12137.988	12454.176	1356.372	653.000
49	3123	0	0	0	0	0	0	12114.792	12448.920	1357.656	653.000
50	3125	0	0	0	0	0	0	12097.092	12435.324	1359.120	653.000
51	3128	0	0	0	0	0	0	12085.932	12413.688	1360.752	653.000
52	3198	0	0	0	0	0	0	12084.947	12392.041	1361.904	653.000
53	3199	0	0	0	0	0	0	12088.080	12372.215	1362.768	653.000
54	3200	0	0	0	0	0	0	12091.212	12352.380	1363.644	653.000
55	3205	0	0	0	0	0	0	12094.476	12331.920	1364.556	653.000
56	3208	0	0	0	0	0	0	12097.632	12312.037	1365.432	653.000
57	3210	0	0	0	0	0	0	12100.788	12292.140	1366.308	653.000
58	3212	0	0	0	0	0	0	12109.512	12272.472	1367.448	653.000
59	3215	0	0	0	0	0	0	12125.772	12260.160	1368.708	653.000
60	3220	0	0	0	0	0	0	12148.860	12257.352	1369.956	653.000
61	3222	0	0	0	0	0	0	12176.184	12274.104	1371.768	653.000
62	3225	0	0	0	0	0	0	12184.176	12298.668	1373.268	653.000

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63	3230	0	0	0	0	0	0	12183.648	12305.256	1373.580	653.000
64	3235	0	0	0	0	0	0	12180.216	12327.000	1374.552	653.000
65	3237	0	0	0	0	0	0	12176.772	12348.756	1375.512	653.000
66	3238	0	0	0	0	0	0	12174.348	12364.068	1379.220	653.000
67	3240	0	0	0	0	0	0	12172.320	12376.908	1388.424	653.000
68	3243	0	0	0	0	0	0	12170.976	12385.451	1401.828	653.000
69	3245	0	0	0	0	0	0	12170.508	12388.439	1417.464	653.000
70	3250	0	0	0	0	0	0	12170.508	12388.439	1426.440	653.000

SPRING ELEMENTS

ELEMENT TYPE = 1
 NUMBER OF ELEMENTS = 16

ELEMENT LOAD CASE MULTIPLIERS

CASE (A) CASE (B) CASE (C) CASE (D)
 1.0000 1.0000 1.0000 1.0000

ELEMENT NUMBER	NODE (N)	SUPPORT GROUP	CODE KD	CODE KR	DIRECTION COSINES WRT GLOBAL AXES	SPECIFIED DISPLACEMENT	SPECIFIED ROTATION	SPRING RATE
					X- Y- Z-			
1	7090	2	1	0	1.000 .000 .000	.000	.000	1.000E+11
2	7090	2	1	0	.000 1.000 .000	.000	.000	1.000E+11
3	7090	2	1	0	.000 .000 1.000	.000	.000	1.000E+11
4	7090	2	0	1	1.000 .000 .000	.000	.000	1.000E+13
5	7090	2	0	1	.000 1.000 .000	.000	.000	1.000E+13
6	7090	2	0	1	.000 .000 1.000	.000	.000	1.000E+13
7	3047	1	1	0	.000 .000 .000	.000	.000	6.000E+02
8	3116	1	1	0	.000 .000 .000	.000	.000	6.000E+02
9	3210	1	1	0	1.000 .000 .000	.000	.000	5.000E+06
10	3210	1	1	0	.000 1.000 .000	.000	.000	6.000E+02
11	3250	3	1	0	.000 .000 1.000	.000	.000	1.000E+11
12	3250	3	1	0	.000 1.000 .000	.000	.000	1.000E+11
13	3250	3	1	0	.000 .000 1.000	.000	.000	1.000E+11
14	3250	3	0	1	1.000 .000 .000	.000	.000	1.000E+13
15	3250	3	0	1	.000 1.000 .000	.000	.000	1.000E+13
16	3250	3	0	1	.000 .000 1.000	.000	.000	1.000E+13

S U B E R R E L E M E N T S

ELEMENT TYPE = 4
 NUMBER OF ELEMENTS = 2

ELEMENT LOAD CASE MULTIPLIERS

CASE (A) CASE (B) CASE (C) CASE (D)
 1.0000 1.0000 1.0000 1.0000

ELEMENT NUMBER	NOOE (N)	SUPPORT GROUP	CODE KD	CODE KR	DIRECTION COSINES WRT GLOBAL AXES	SPECIFIED DISPLACEMENT	SPECIFIED ROTATION	SPRING RATE
					X- Y- Z-			
1	3035	1	1	0	.000 1.000 .000	.000	.000	5.5150E+05
2	3083	1	1	0	.000 .000 1.000	.000	.000	5.5150E+05

PIPE ELEMENT INPUT DATA

CONTROL INFORMATION

NUMBER OF PIPE ELEMENTS	=	69
NUMBER OF MATERIAL SETS	=	2
MAXIMUM NUMBER OF MATERIAL. TEMPERATURE INPUT POINTS	=	3
NUMBER OF SECTION PROPERTY SETS	=	4
NUMBER OF BRANCH POINT NODES	=	0
MAXIMUM NUMBER OF TANGENTS COMMON TO A BRANCH POINT	=	3
FLAG FOR NEGLECTING AXIAL DEFORMATIONS IN BEND ELEMENTS (EQ.1, NEGLECT)	=	0

MATERIAL PROPERTY TABLES

MATERIAL NUMBER = (1)
 NUMBER OF TEMPERATURE POINTS = (3)
 IDENTIFICATION = { SA376 316LN }

POINT NUMBER	TEMPERATURE	YOUNG'S MODULUS	POISSON'S RATIO	THERMAL EXPANSION
1	70.00	2.813E+07	.300	8.540E-06
2	650.00	2.505E+07	.300	9.690E-06
3	700.00	2.480E+07	.300	9.760E-06

MATERIAL NUMBER = (2)
 NUMBER OF TEMPERATURE POINTS = (2)
 IDENTIFICATION = { FICTITIOUS MAT }

POINT NUMBER	TEMPERATURE	YOUNG'S MODULUS	POISSON'S RATIO	THERMAL EXPANSION
1	70.00	2.530E+07	.300	0.000E+00
2	700.00	2.530E+07	.300	0.000E+00

SECTION PROPERTY TABLE

SECTION NUMBER	OUTSIDE DIAMETER	WALL THICKNESS	SHAPE FACTOR FOR SHEAR	WEIGHT/UNIT LENGTH	MASS/UNIT LENGTH	DESCRIPTION
1	18.000	1.7810	.0000	3.4033E+01	8.8077E-02	18 IN SCH 160
2	21.100	3.3400	.0000	5.8824E+01	1.5224E-01	
3	24.300	4.9000	.0000	9.0596E+01	2.3472E-01	
4	37.500	3.2500	.0000	0.0000E+00	0.0000E+00	

ELEMENT LOAD CASE MULTIPLIERS

	CASE A	CASE B	CASE C	CASE D
X-DIRECTION GRAVITY	.000	.000	.000	.000
Y-DIRECTION GRAVITY	.000	.000	.000	.000
Z-DIRECTION GRAVITY	-1.000	.000	.000	.000
THERMAL DISTORTION	.000	.000	.000	.000
PRESSURE DISTORTION	.000	.000	.000	.000

P I P E E L E M E N T I N P U T D A T A

ELEMENT NUMBER	ELEMENT TYPE	NODE -I	NODE -J	MATL. NUMBER	SECTION NUMBER	REFERENCE TEMPERATURE (BEND RADIUS)	DESIGN PRESSURE (THIRD POINT)	PEAK PRESSURE (X3-ORDINATE)	TEST PRESSURE (Y3-ORDINATE)	END CODES END-I END-J (Z3-ORDINATE)	NODE INCREMENT (BEND DEGREE)	INPUT TAG
1	TANGENT	7090	3001	2	4	70.00	2485.00	.00	.00	0 0	1	II
2	TANGENT	3001	3005	1	3	70.00	2485.00	.00	.00	0 0	1	II
3	TANGENT	3005	3010	1	2	70.00	2485.00	.00	.00	0 0	1	II
4	TANGENT	3010	3011	1	1	70.00	2485.00	.00	.00	0 0	1	II
5	TANGENT	3011	3012	1	1	70.00	2485.00	.00	.00	0 0	1	II
6	BEND	3012	3019	1	1	(90.0000)	(11945.652)	(12253.896)	(1272.012)	(1272.012)	(11.7703)	I
7	BEND	3019	3021	1	1	(90.0000)	()	(11961.012)	(12248.628)	(1277.820)	(10.0888)	I
8	BEND	3021	3023	1	1	(90.0000)	()	(11969.976)	(12248.195)	(1280.076)	(1.7692)	I
9	TANGENT	3023	3024	1	1	70.00	2485.00	.00	.00	0 0	1	II
10	TANGENT	3024	3026	1	1	70.00	2485.00	.00	.00	0 0	1	II
11	TANGENT	3026	3028	1	1	70.00	2485.00	.00	.00	0 0	1	II
12	TANGENT	3028	3030	1	1	70.00	2485.00	.00	.00	0 0	1	II
13	TANGENT	3030	3032	1	1	70.00	2485.00	.00	.00	0 0	1	II
14	TANGENT	3032	3035	1	1	70.00	2485.00	.00	.00	0 0	1	II
15	TANGENT	3035	3037	1	1	70.00	2485.00	.00	.00	0 0	1	II
16	TANGENT	3037	3038	1	1	70.00	2485.00	.00	.00	0 0	1	II
17	TANGENT	3038	3040	1	1	70.00	2485.00	.00	.00	0 0	1	II
18	TANGENT	3040	3044	1	1	70.00	2485.00	.00	.00	0 0	1	II
19	TANGENT	3044	3047	1	1	70.00	2485.00	.00	.00	0 0	1	II
20	TANGENT	3047	3050	1	1	70.00	2485.00	.00	.00	0 0	1	II
21	BEND	3050	3053	1	1	(90.0000)	()	(12192.012)	(12248.195)	(1331.244)	(2.6346)	I
22	BEND	3053	3056	1	1	(90.0000)	()	(12197.328)	(12248.616)	(1332.480)	(4.3250)	I
23	BEND	3056	3059	1	1	(90.0000)	()	(12201.145)	(12249.608)	(1333.392)	(.7858)	I
24	BEND	3059	3062	1	1	(90.0000)	()	(12204.120)	(12250.128)	(1334.100)	(3.1970)	I
25	BEND	3062	3065	1	1	(90.0000)	()	(12210.744)	(12252.364)	(1335.732)	(6.0440)	I
26	BEND	3065	3068	1	1	(90.0000)	()	(12216.936)	(12255.816)	(1337.292)	(3.1919)	I
27	BEND	3068	3071	1	1	(90.0000)	()	(12223.296)	(12260.160)	(1338.924)	(6.8653)	I
28	BEND	3071	3074	1	1	(90.0000)	()	(12227.676)	(12264.660)	(1340.124)	(1.2972)	I

PIPE ELEMENT INPUT DATA

ELEMENT NUMBER	ELEMENT TYPE	NODE -I	NODE -J	MATL. NUMBER	SECTION NUMBER	REFERENCE TEMPERATURE (BEND RADIUS)	DESIGN PRESSURE (THIRD POINT)	PEAK PRESSURE (X3-ORDINATE)	TEST PRESSURE (Y3-ORDINATE)	END CODES (Z3-ORDINATE)	END -I	END -J	NODE INCREMENT (BEND DEGREE)	INPUT TAG
29	BEND	3074	3077	1	1	70.00 (90.000)	2485.00 ()	.00 (12228.972)	.00 (12266.076)	0 (1340.484)	0	0	(1.3097)	I
30	BEND	3077	3080	1	1	70.00 (90.000)	2485.00 ()	.00 (12237.660)	.00 (12276.396)	0 (1342.920)	0	0	(15.9617)	I
31	BEND	3080	3083	1	1	70.00 (90.000)	2485.00 ()	.00 (12242.292)	.00 (12295.140)	0 (1344.792)	0	0	(8.5588)	I
32	TANGENT	3083	3086	1	1	70.00	2485.00	.00	.00	0	0	1	II	
33	TANGENT	3086	3089	1	1	70.00	2485.00	.00	.00	0	0	1	II	
34	TANGENT	3089	3092	1	1	70.00	2485.00	.00	.00	0	0	1	II	
35	TANGENT	3092	3095	1	1	70.00	2485.00	.00	.00	0	0	1	II	
36	TANGENT	3095	3098	1	1	70.00	2485.00	.00	.00	0	0	1	II	
37	TANGENT	3098	3100	1	1	70.00	2485.00	.00	.00	0	0	1	II	
38	TANGENT	3100	3101	1	1	70.00	2485.00	.00	.00	0	0	1	II	
39	TANGENT	3101	3104	1	1	70.00	2485.00	.00	.00	0	0	1	II	
40	TANGENT	3104	3107	1	1	70.00	2485.00	.00	.00	0	0	1	II	
41	BEND	3107	3110	1	1	70.00 (90.000)	2485.00 ()	.00 (12242.292)	.00 (12408.504)	0 (1349.820)	0	0	(10.4162)	I
42	BEND	3110	3113	1	1	70.00 (90.000)	2485.00 ()	.00 (12237.576)	.00 (12423.636)	0 (1350.684)	0	0	(9.7524)	I
43	BEND	3113	3115	1	1	70.00 (90.000)	2485.00 ()	.00 (12226.536)	.00 (12440.305)	0 (1351.908)	0	0	(15.6197)	I
44	BEND	3115	3116	1	1	70.00 (90.000)	2485.00 ()	.00 (12203.231)	.00 (12454.176)	0 (1353.528)	0	0	(18.7479)	I
45	TANGENT	3116	3119	1	1	70.00	2485.00	.00	.00	0	0	1	II	
46	TANGENT	3119	3120	1	1	70.00	2485.00	.00	.00	0	0	1	II	
47	TANGENT	3120	3122	1	1	70.00	2485.00	.00	.00	0	0	1	II	
48	BEND	3122	3123	1	1	70.00 (90.000)	2485.00 ()	.00 (12125.796)	.00 (12454.176)	0 (1356.900)	0	0	(15.4437)	I
49	BEND	3123	3125	1	1	70.00 (90.000)	2485.00 ()	.00 (12104.496)	.00 (12443.988)	0 (1358.352)	0	0	(14.4851)	I
50	BEND	3125	3128	1	1	70.00 (90.000)	2485.00 ()	.00 (12088.992)	.00 (12425.868)	0 (1360.908)	0	0	(15.7926)	I
51	BEND	3128	3198	1	1	70.00 (90.000)	2485.00 ()	.00 (12083.231)	.00 (12402.959)	0 (1361.424)	0	0	(14.0421)	I
52	TANGENT	3198	3199	1	1	70.00	2485.00	.00	.00	0	0	1	II	
53	TANGENT	3199	3200	1	1	70.00	2485.00	.00	.00	0	0	1	II	
54	TANGENT	3200	3205	1	1	70.00	2485.00	.00	.00	0	0	1	II	
55	TANGENT	3205	3208	1	1	70.00	2485.00	.00	.00	0	0	1	II	
56	TANGENT	3208	3210	1	1	70.00	2485.00	.00	.00	0	0	1	II	

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PIPE ELEMENT INPUT DATA

ELEMENT NUMBER	ELEMENT TYPE	NODE -I	NODE -J	MATL. NUMBER	SECTION NUMBER	REFERENCE TEMPERATURE (BEND RADIUS)	DESIGN PRESSURE (THIRD POINT)	PEAK PRESSURE (X3-ORDINATE)	TEST PRESSURE (Y3-ORDINATE)	END CODES END-I (Z3-ORDINATE)	END-J	NODE INCREMENT (BEND DEGREE)	INPUT TAG
57	BEND	3210	3212	1	1	70.00 (90.000)	2485.00 ()	.00 (12102.540)	.00 (12281.148)	0 (1366.788)	0	(14.1135)	I
58	BEND	3212	3215	1	1	70.00 (90.000)	2485.00 ()	.00 (12116.088)	.00 (12264.276)	0 (1368.072)	0	(13.3422)	I
59	BEND	3215	3220	1	1	70.00 (90.000)	2485.00 ()	.00 (12136.860)	.00 (12255.443)	0 (1369.428)	0	(15.2783)	I
60	BEND	3220	3222	1	1	70.00 (90.000)	2485.00 ()	.00 (12165.996)	.00 (12260.100)	0 (1370.712)	0	(21.8493)	I
61	BEND	3222	3225	1	1	70.00 (90.000)	2485.00 ()	.00 (12184.176)	.00 (12285.107)	0 (1372.584)	0	(17.2155)	I
62	BEND	3225	3230	1	1	70.00 (90.000)	2485.00 ()	.00 (12184.176)	.00 (12301.980)	0 (1373.424)	0	(4.2197)	I
63	TANGENT	3230	3235	1	1	70.00	2485.00	.00	.00	0	0	1	II
64	TANGENT	3235	3237	1	1	70.00	2485.00	.00	.00	0	0	1	II
65	BEND	3237	3238	1	1	70.00 (90.000)	2485.00 ()	.00 (12175.512)	.00 (12356.771)	0 (1375.872)	0	(10.3126)	I
66	BEND	3238	3240	1	1	70.00 (90.000)	2485.00 ()	.00 (12173.195)	.00 (12371.364)	0 (1382.556)	0	(10.2918)	I
67	BEND	3240	3243	1	1	70.00 (90.000)	2485.00 ()	.00 (12171.443)	.00 (12382.463)	0 (1394.292)	0	(10.3206)	I
68	BEND	3243	3245	1	1	70.00 (90.000)	2485.00 ()	.00 (12170.508)	.00 (12388.439)	0 (1409.352)	0	(10.2970)	I
69	TANGENT	3245	3250	1	1	70.00	2485.00	.00	.00	0	0	1	II

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BENCHMARK PROBLEM 2
LOWER FREQUENCY AMPLIFIED GROUP RESPONSE

SUPPORT GROUP 1

DIRECTION FACTORS

X = 1.0000 Y = 1.0000 Z = 1.0000

INDICATOR FOR DISPLACEMENT OR ACCELERATION SPECTRUM = 2

EQ.0 DISPLACEMENT
EQ.1 ACCELERATION IN IN./SEC.**2
EQ.2 ACCELERATION IN G**S

3 SPECTRA ARE ENTERED FOR CASE 1. KIND= 2
CLUSTER FACTOR, CF = .10000

MODAL PARTICIPATION FACTORS

MODE	FREQ (CPS)	X-DIRECTION	Y-DIRECTION	Z-DIRECTION
1	4.060	9.6631E-01	-6.1897E+00	-2.0295E-01
2	4.526	-2.8479E-01	1.3601E+00	2.1055E+00
3	8.853	8.5149E-01	-2.9004E+00	-4.4540E-01
4	10.308	-2.4974E+00	3.1624E+00	-8.9463E-01
5	15.502	2.7321E-01	-1.3074E+00	1.2271E+00
6	18.727	6.6621E-02	4.5781E-01	3.4010E+00
7	23.947	-2.6113E+00	-1.4766E+00	8.9915E-01
8	34.765	5.4258E-01	5.0632E-01	1.7779E+00
9	38.358	-4.6275E-01	9.3354E-01	-1.1461E+00
10	42.006	-1.0235E+00	1.3590E+00	5.1590E-01
11	53.469	-9.6327E-01	3.4110E-01	2.5221E-01
12	55.962	-2.3043E+00	-3.9121E-01	1.3119E-01
13	59.369	2.1526E+00	8.0456E-03	3.1686E-01

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SPECTRUM TABLE (GROUP 1 SSE X DIRECTION

NUMBER OF POINTS = 16
SCALE FACTOR = 1.00000E+00

INPUT POINT	PERIOD	SPECTRUM VALUE
1	2.5000E-02	3.6940E-01
2	2.5600E-02	3.9130E-01
3	1.8300E-02	6.3570E-01
4	6.4400E-02	8.4180E-01
5	8.2800E-02	9.3660E-01
6	1.1220E-01	9.8920E-01
7	1.5330E-01	9.5440E-01
8	1.9320E-01	9.7130E-01
9	2.1740E-01	1.0488E+00
10	2.5150E-01	1.1005E+00
11	3.3330E-01	1.1338E+00
12	4.4230E-01	1.1338E+00
13	4.5770E-01	1.1205E+00
14	5.0000E-01	1.0764E+00
15	5.4765E-01	1.0585E+00
16	5.7470E+00	1.0730E-01

SPECTRUM TABLE (GROUP 1 SSE Y DIRECTION

NUMBER OF POINTS = 19
SCALE FACTOR = 1.00000E+00

INPUT POINT	PERIOD	SPECTRUM VALUE
1	2.5000E-02	3.2270E-01
2	2.5580E-02	3.4640E-01

3	4.3480E-02	4.9610E-01
4	5.1150E-02	5.9680E-01
5	5.5000E-02	5.9680E-01
6	7.2500E-02	8.5280E-01
7	8.3330E-02	8.4660E-01
8	1.1510E-01	9.7700E-01
9	1.5230E-01	9.7700E-01
10	1.8120E-01	8.9780E-01
11	1.9760E-01	9.0910E-01
12	2.1740E-01	9.0910E-01
13	2.6350E-01	1.1246E+00
14	3.4840E-01	1.1246E+00
15	3.5930E-01	1.0574E+00
16	4.2590E-01	1.0574E+00
17	4.7920E-01	1.0227E+00
18	5.4765E-01	1.0227E+00
19	5.7470E+00	1.0310E-01

SPECTRUM TABLE (GROUP 1 SSE Z DIRECTION

NUMBER OF POINTS = 21
SCALE FACTOR = 1.00000E+00

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INPUT POINT	PERIOD	SPECTRUM VALUE
1	2.5000E-02	4.0390E-01
2	2.5580E-02	4.0820E-01
3	4.8300E-02	6.0870E-01
4	5.9970E-02	7.5350E-01
5	7.2460E-02	8.3060E-01
6	9.5800E-02	8.3060E-01
7	1.0450E-01	8.2420E-01
8	1.4490E-01	1.0506E+00
9	1.6430E-01	1.0507E+00
10	1.7390E-01	1.1719E+00
11	1.9760E-01	1.1979E+00
12	2.0000E-01	1.2004E+00
13	2.1060E-01	1.2796E+00
14	2.7850E-01	1.2796E+00
15	2.8750E-01	1.2552E+00
16	3.3330E-01	1.2552E+00
17	3.8330E-01	1.0347E+00
18	4.7920E-01	1.0347E+00
19	5.4765E-01	6.9860E-01
20	6.0530E-01	6.9860E-01
21	5.7470E+00	6.5000E-02

CLUSTERING. +1 MEANS MODE I CLOSE TO I+1. -1, NOT.
-1. -1. -1. -1. -1. -1. -1. -1. 1. -1. 1. -1. 0.

***** COMBINED MODAL RESPONSES FOR SUPPORT GROUP 1 *****
 MODAL COMBINATION METHOD 2-GROUPING

NODE NUMBER	DISPLACEMENTS / ROTATIONS			ACCELERATIONS IN G'S					
	X- TRANSLATION	Y- TRANSLATION	Z- TRANSLATION	X- ROTATION	Y- ROTATION	Z- ROTATION	X- DIRECTION	Y- DIRECTION	Z- DIRECTION
7090	.33922E-07	.10134E-06	.24562E-07	.50443E-07	.30498E-07	.56823E-07	.000	.000	.000
3001	.99973E-04	.15913E-03	.79300E-04	.71729E-05	.41651E-05	.69315E-05	.002	.003	.002
3005	.14357E-03	.22669E-03	.12068E-03	.12626E-04	.73664E-05	.11545E-04	.003	.004	.003
3010	.21712E-03	.34051E-03	.19440E-03	.22958E-04	.13457E-04	.19746E-04	.004	.005	.003
3011	.38505E-03	.60052E-03	.37154E-03	.51512E-04	.30323E-04	.40612E-04	.008	.010	.009
3012	.83421E-03	.12762E-02	.92351E-03	.96648E-04	.57137E-04	.69302E-04	.017	.021	.019
3019	.21933E-02	.35845E-02	.30218E-02	.18585E-03	.10792E-03	.10455E-03	.044	.059	.057
3021	.30835E-02	.60445E-02	.52687E-02	.25919E-03	.14362E-03	.10681E-03	.063	.106	.106
3023	.31732E-02	.64494E-02	.56493E-02	.27186E-03	.14937E-03	.10503E-03	.066	.115	.116
3024	.35622E-02	.81078E-02	.75888E-02	.32904E-03	.17355E-03	.93683E-04	.076	.153	.162
3026	.41271E-02	.94458E-02	.10404E-01	.39577E-03	.19751E-03	.10269E-03	.088	.196	.220
3028	.47773E-02	.95938E-02	.13580E-01	.45974E-03	.21589E-03	.17411E-03	.100	.230	.278
3030	.60316E-02	.62479E-02	.19533E-01	.56390E-03	.23640E-03	.40612E-03	.119	.260	.367
3032	.73816E-02	.91436E-02	.25801E-01	.66377E-03	.24686E-03	.74176E-03	.132	.258	.436
3035	.87463E-02	.30494E-01	.32104E-01	.76230E-03	.25261E-03	.11728E-02	.139	.253	.482
3037	.10082E-01	.65681E-01	.38285E-01	.86634E-03	.25939E-03	.16225E-02	.141	.299	.507
3038	.11376E-01	.11210E+00	.44302E-01	.97787E-03	.27206E-03	.20159E-02	.140	.387	.514
3040	.12637E-01	.16817E+00	.50243E-01	.10946E-02	.29320E-03	.23557E-02	.138	.495	.507
3044	.13137E-01	.19268E+00	.52612E-01	.11419E-02	.30398E-03	.24761E-02	.135	.539	.501
3047	.13376E-01	.20509E+00	.53780E-01	.11651E-02	.30970E-03	.25319E-02	.134	.560	.497
3050	.13503E-01	.21676E+00	.54864E-01	.11868E-02	.31524E-03	.25819E-02	.133	.580	.494
3053	.13837E-01	.22713E+00	.55708E-01	.12058E-02	.32035E-03	.26244E-02	.132	.597	.490
3056	.14586E-01	.24439E+00	.56347E-01	.12370E-02	.32975E-03	.26918E-02	.130	.625	.481
3059	.14835E-01	.24752E+00	.56332E-01	.12427E-02	.33161E-03	.27037E-02	.130	.630	.479
3062	.16457E-01	.26021E+00	.55905E-01	.12658E-02	.33963E-03	.27511E-02	.129	.649	.469
3065	.23013E-01	.28390E+00	.53661E-01	.13092E-02	.35646E-03	.28364E-02	.131	.685	.444
3068	.28906E-01	.29575E+00	.51494E-01	.13317E-02	.36633E-03	.28791E-02	.134	.702	.428
3071	.46078E-01	.31982E+00	.45084E-01	.13794E-02	.38922E-03	.29658E-02	.149	.736	.391
3074	.50180E-01	.32386E+00	.43470E-01	.13882E-02	.39384E-03	.29813E-02	.154	.742	.383
3077	.54459E-01	.32784E+00	.41776E-01	.13970E-02	.39856E-03	.29968E-02	.159	.748	.375
3080	.11760E+00	.36752E+00	.16073E-01	.15010E-02	.45970E-03	.31685E-02	.258	.801	.296
3083	.15959E+00	.37469E+00	.15534E-02	.15534E-02	.49323E-03	.32490E-02	.332	.811	.281
3086	.17157E+00	.37468E+00	.12021E-01	.15674E-02	.50225E-03	.32703E-02	.353	.812	.284
3089	.20378E+00	.37465E+00	.26688E-01	.16024E-02	.52671E-03	.33252E-02	.410	.812	.300
3092	.26577E+00	.37456E+00	.56524E-01	.16595E-02	.57459E-03	.34230E-02	.517	.813	.359
3095	.30687E+00	.37452E+00	.76518E-01	.16905E-02	.60667E-03	.34828E-02	.585	.814	.410
3098	.31318E+00	.37451E+00	.79589E-01	.16948E-02	.61161E-03	.34917E-02	.595	.814	.418
3100	.38576E+00	.37441E+00	.11495E+00	.17365E-02	.66861E-03	.35889E-02	.709	.815	.514
3101	.46022E+00	.37432E+00	.15101E+00	.17658E-02	.72709E-03	.36815E-02	.822	.815	.614
3104	.46298E+00	.37431E+00	.15236E+00	.17667E-02	.72929E-03	.36848E-02	.826	.815	.618
3107	.50331E+00	.37425E+00	.17173E+00	.17774E-02	.76086E-03	.37330E-02	.887	.816	.672
3110	.56426E+00	.36863E+00	.20133E+00	.17884E-02	.80796E-03	.38052E-02	.980	.810	.748
3113	.61819E+00	.34668E+00	.22906E+00	.17938E-02	.84941E-03	.38751E-02	1.064	.785	.797
3115	.68954E+00	.28406E+00	.26910E+00	.17972E-02	.90755E-03	.39956E-02	1.178	.715	.826
3116	.73204E+00	.17591E+00	.30162E+00	.17979E-02	.96222E-03	.41528E-02	1.246	.609	.783
3119	.73173E+00	.11984E+00	.30928E+00	.17984E-02	.98406E-03	.42309E-02	1.246	.565	.743
3120	.73132E+00	.58836E-01	.31963E+00	.17994E-02	.10080E-02	.43289E-02	1.245	.531	.713
3122	.73089E+00	.68307E-01	.33073E+00	.18010E-02	.10283E-02	.44255E-02	1.245	.527	.712
3123	.71558E+00	.16237E+00	.34095E+00	.18039E-02	.10512E-02	.45505E-02	1.221	.574	.747
3125	.65814E+00	.24743E+00	.33377E+00	.18047E-02	.10715E-02	.46511E-02	1.132	.650	.784
3128	.55954E+00	.30921E+00	.30981E+00	.17970E-02	.10953E-02	.47218E-02	.977	.717	.810
3198	.45532E+00	.32207E+00	.27715E+00	.17756E-02	.11182E-02	.47363E-02	.809	.732	.792
3199	.36081E+00	.30744E+00	.24375E+00	.17403E-02	.11384E-02	.47026E-02	.652	.714	.750
3200	.26735E+00	.29295E+00	.21205E+00	.16900E-02	.11569E-02	.46210E-02	.492	.696	.721
3205	.17311E+00	.27819E+00	.18191E+00	.16212E-02	.11733E-02	.44843E-02	.326	.676	.706
3208	.84709E-01	.26441E+00	.15621E+00	.15371E-02	.11863E-02	.42992E-02	.169	.655	.711
3210	.99837E-03	.25125E+00	.13528E+00	.14358E-02	.11958E-02	.40615E-02	.078	.633	.734
3212	.83635E-01	.22745E+00	.11673E+00	.13030E-02	.12045E-02	.37458E-02	.227	.587	.763

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3215	.13723E+00	.17431E+00	.98238E-01	.11474E-02	.12081E-02	.34002E-02	.347	.473	.742
3220	.15867E+00	.10108E+00	.78648E-01	.94817E-03	.11759E-02	.29562E-02	.394	.312	.682
3222	.12999E+00	.18945E-01	.53803E-01	.70197E-03	.10266E-02	.22759E-02	.336	.158	.573
3225	.83358E-01	.12637E-01	.36062E-01	.58508E-03	.83843E-03	.17523E-02	.267	.145	.453
3230	.72447E-01	.12271E-01	.32335E-01	.56223E-03	.79129E-03	.16316E-02	.253	.144	.417
3235	.41952E-01	.90814E-02	.21552E-01	.48732E-03	.64169E-03	.12615E-02	.209	.135	.294
3237	.19016E-01	.77518E-02	.12374E-01	.40786E-03	.49894E-03	.93826E-03	.162	.126	.178
3238	.72667E-02	.71001E-02	.67746E-02	.34144E-03	.39514E-03	.72779E-03	.122	.113	.101
3240	.20584E-02	.50082E-02	.27549E-02	.26380E-03	.28287E-03	.52336E-03	.076	.080	.043
3243	.14274E-02	.23627E-02	.61221E-03	.17204E-03	.16930E-03	.31608E-03	.033	.039	.010
3245	.39110E-03	.40933E-03	.22961E-04	.65595E-04	.60072E-04	.11035E-03	.006	.008	.000
3250	.69754E-07	.74108E-07	.57968E-07	.57279E-07	.52885E-07	.71449E-07	.000	.000	.000

***** COMBINED MODAL RESPONSES FOR SUPPORT GROUP 1 *****
 MODAL COMBINATION METHOD 2-GROUPING

PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	STATION	AXIAL FORCE	Y-AXIS SHRAP	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
1	TANGENT	END-I	5143.386	9354.879	2528.538	166588.73	392068.39	699361.14
		END-J	5143.396	9354.879	2528.538	166588.73	357294.12	524968.86
2	TANGENT	END-I	5140.535	9356.370	2528.256	166605.39	357264.26	524983.98
		END-J	5140.535	9356.370	2528.256	166605.39	349369.30	483275.18
3	TANGENT	END-I	5140.485	9356.055	2527.472	166605.39	349369.30	483275.18
		END-J	5140.485	9356.055	2527.472	166605.39	341671.75	441627.59
4	TANGENT	END-I	5129.852	9363.058	2521.264	168640.02	342020.98	440583.43
		END-J	5129.852	9363.058	2521.264	168640.02	333514.26	393189.61
5	TANGENT	END-I	5139.831	9356.648	2521.292	167942.34	333472.21	393523.79
		END-J	5139.831	9356.648	2521.292	167942.34	319900.39	314563.63
6	BEND	END-I	5135.884	8784.717	4067.971	167440.99	355431.57	273674.33
		CENTER	4435.843	9157.858	4067.971	192078.61	315404.96	195355.80
		END-J	3785.007	9445.457	4067.971	215162.11	275130.44	120778.25
7	BEND	END-I	3091.108	9617.737	4214.602	243943.62	248820.86	123106.01
		CENTER	2877.666	9683.698	4214.602	259764.87	214081.65	81543.06
		END-J	2885.937	9681.193	4214.602	272412.05	184736.05	99438.89
8	BEND	END-I	3203.960	9144.636	5068.579	285427.66	158389.21	108019.23
		CENTER	3266.773	9122.520	5068.579	286780.29	155803.71	114505.02
		END-J	3333.596	9098.360	5068.579	288016.59	153820.90	121947.82
9	TANGENT	END-I	3421.396	10118.379	2314.466	289392.17	161975.85	107240.24
		END-J	3421.396	10118.379	2314.466	289392.17	139578.83	235839.21
10	TANGENT	END-I	3415.725	10109.278	2247.632	289272.37	139578.83	235986.10
		END-J	3415.725	10109.278	2247.632	289272.37	117081.19	393450.92
11	TANGENT	END-I	3409.556	10098.420	2148.314	289272.37	117081.19	393450.92
		END-J	3409.556	10098.420	2148.314	289272.37	102019.53	550958.24
12	TANGENT	END-I	3401.309	10085.747	1980.988	289497.25	102019.53	550840.08
		END-J	3401.309	10085.747	1980.988	289497.25	97668.75	819718.55
13	TANGENT	END-I	3390.778	10082.689	1709.145	289750.42	97668.75	819629.13
		END-J	3390.778	10082.689	1709.145	289750.42	113455.75	1088189.82
14	TANGENT	END-I	3380.380	10107.015	1407.000	289521.73	113455.75	1088250.66
		END-J	3380.380	10107.015	1407.000	289521.73	134679.07	135732.11
15	TANGENT	END-I	3370.167	7177.510	1124.000	289456.33	134679.07	1357346.03
		END-J	3370.167	7177.510	1124.000	289456.33	152849.78	1193689.57
16	TANGENT	END-I	3360.118	6997.239	939.408	289750.89	152849.78	1193618.16
		END-J	3360.118	6997.239	939.408	289750.89	165021.51	1041994.18
17	TANGENT	END-I	3350.212	6722.984	940.673	289555.62	165021.51	1042048.53
		END-J	3350.212	6722.984	940.673	289555.62	171218.61	907115.80
18	TANGENT	END-I	3343.315	6459.084	1049.062	289791.31	171218.61	907040.50
		END-J	3343.315	6459.084	1049.062	289791.31	172456.30	859553.60
19	TANGENT	END-I	3340.889	6335.792	1114.324	287942.03	172456.30	860174.97

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		END-J	3340.889	6335.792	1114.324	287942.03	172890.29	838352.70
20	TANGENT	END-I	3339.200	6254.402	1160.590	289639.44	172890.29	837767.68
		END-J	3339.200	6254.402	1160.590	289639.44	173257.19	818490.89
21	BEND	END-I	3337.542	6178.272	1203.942	289892.13	173257.19	818401.39
		CENTER	3316.351	6189.578	1203.942	290796.03	171860.31	810206.97
		END-J	3299.486	6198.684	1203.942	291602.53	170641.63	802012.24
22	BEND	END-I	3278.819	6117.698	1232.151	292698.36	179704.13	799632.46
		CENTER	3268.588	6123.227	1232.151	293967.19	177505.66	786116.29
		END-J	3270.024	6122.447	1232.151	294964.54	175828.90	772634.96
23	BEND	END-I	3276.549	5029.663	3583.924	297535.02	405272.19	679783.60
		CENTER	3279.593	5027.675	3583.924	296594.60	404673.50	677741.84
		END-J	3282.838	5025.514	3583.924	295672.90	404063.26	675700.68
24	BEND	END-I	3289.725	5970.515	1336.323	296949.08	191244.21	763228.88
		CENTER	3311.981	5958.201	1336.323	297494.10	190042.24	753185.00
		END-J	3339.662	5942.734	1336.323	297888.03	189149.93	743182.49
25	BEND	END-I	3350.005	5793.728	1409.799	296317.05	168305.55	748797.84
		CENTER	3420.760	5752.178	1409.799	295111.92	170176.64	730050.22
		END-J	3507.228	5699.984	1409.799	293398.32	173065.11	711498.69
26	BEND	END-I	3578.600	5444.939	1668.576	294110.05	187039.19	707656.46
		CENTER	3632.796	5408.921	1668.576	291972.50	189350.98	698155.34
		END-J	3689.617	5370.397	1668.576	289731.78	191790.30	688723.70
27	BEND	END-I	3680.068	5254.985	1553.603	287664.52	189736.59	690170.62
		CENTER	3804.770	5165.438	1553.603	284121.67	194962.62	669773.33
		END-J	3936.542	5065.581	1553.603	279997.09	201139.10	649713.28
28	BEND	END-I	4037.290	4647.478	2061.423	270643.41	292810.79	618073.48
		CENTER	4060.885	4626.763	2061.423	270343.82	292766.34	614305.77
		END-J	4084.565	4605.861	2061.423	270038.35	292752.66	610549.23
29	BEND	END-I	4057.472	4694.183	1786.772	271204.43	221443.27	639351.33
		CENTER	4081.826	4672.994	1786.772	269833.04	222651.27	635798.56
		END-J	4106.196	4651.589	1786.772	268450.50	223864.26	632260.10
30	BEND	END-I	3940.280	4438.308	1780.409	266459.45	217707.81	635259.16
		CENTER	4202.567	4243.434	1780.409	252065.78	235177.59	592542.52
		END-J	4451.184	3981.818	1780.409	236347.93	253629.72	551974.78
31	BEND	END-I	4288.501	3509.972	1936.159	214729.02	272373.04	551877.78
		CENTER	4369.344	3409.162	1936.159	207142.86	280337.52	532821.25
		END-J	4439.287	3317.892	1936.159	200383.08	287813.48	514648.77
32	TANGENT	END-I	4352.750	3006.750	3125.051	193061.17	505169.81	308826.43
		END-J	4352.750	3006.750	3125.051	193061.17	495993.92	298809.18
33	TANGENT	END-I	4182.843	2988.379	3084.504	190959.45	496806.04	298809.18
		END-J	4182.843	2988.379	3084.504	190959.45	473524.94	272565.34
34	TANGENT	END-I	3863.304	2890.449	2985.383	192144.37	473045.78	272565.34
		END-J	3863.304	2850.449	2985.383	192144.37	434086.77	226213.30
35	TANGENT	END-I	3524.689	2754.785	2850.678	191775.70	434249.70	226213.30
		END-J	3524.689	2754.785	2850.678	191775.70	413286.54	198696.27
36	TANGENT	END-I	3383.653	2673.074	2784.477	192496.56	412951.46	198696.27
		END-J	3383.653	2673.074	2784.477	192496.56	410104.07	194742.18
37	TANGENT	END-I	3152.516	2554.370	2685.483	192046.27	410315.01	194742.18
		END-J	3152.516	2554.370	2685.483	192046.27	384659.16	154022.85

38	TANGENT	END-I	2775.772	2265.910	2500.986	192149.84	384607.47	154022.85
		END-J	2775.772	2265.910	2500.986	192149.84	373202.86	122724.88
39	TANGENT	END-I	2655.855	2025.907	2420.277	198335.79	369952.37	122724.88
		END-J	2655.855	2025.907	2420.277	198335.79	369833.87	121815.88
40	TANGENT	END-I	2527.269	1990.951	2390.382	192450.14	372930.59	121815.88
		END-J	2527.269	1990.951	2390.382	192450.14	373654.73	109590.42
41	BEND	END-I	2365.190	2360.603	1758.648	192318.23	111387.50	373193.51
		CENTER	2364.623	2361.207	1758.648	187300.26	111658.99	377884.08
		END-J	2364.040	2361.842	1758.648	181241.90	115001.88	383556.69
42	BEND	END-I	2271.517	2380.834	1502.975	171731.23	128345.01	383700.47
		CENTER	2283.650	2369.286	1502.975	164069.25	132612.29	391835.97
		END-J	2296.890	2356.347	1502.975	155764.48	137827.48	400241.34
43	BEND	END-I	2465.569	2405.547	1245.148	143880.76	150841.20	399997.40
		CENTER	2528.383	2339.429	1245.148	128394.83	155759.44	414806.93
		END-J	2582.982	2279.023	1245.148	112721.96	160153.31	428373.31
44	BEND	END-I	3310.087	2283.872	1158.053	93191.27	171358.62	428731.72
		CENTER	3352.088	2221.807	1158.053	78100.05	165383.25	436696.11
		END-J	3343.852	2234.023	1158.053	68449.17	157191.75	439751.32
45	TANGENT	END-I	3957.115	2565.951	1274.562	66779.38	147040.05	443506.92
		END-J	3957.115	2565.951	1274.562	66779.38	132893.59	431674.55
46	TANGENT	END-I	4525.905	2744.436	1376.494	66809.94	132893.59	431669.81
		END-J	4525.905	2744.436	1376.494	66809.94	114200.54	417855.20
47	TANGENT	END-I	5195.743	2941.610	1524.605	66811.00	114200.54	417855.05
		END-J	5195.743	2941.610	1524.605	66811.00	97355.68	408182.39
48	BEND	END-I	6010.014	3225.222	1623.421	66810.22	84080.94	411124.03
		CENTER	5854.624	3499.295	1623.421	64600.91	77623.91	404006.81
		END-J	5624.787	3857.976	1623.421	61681.23	77357.32	391781.62
49	BEND	END-I	6151.051	4707.145	1856.709	57924.72	80389.34	391744.62
		CENTER	5781.462	5154.441	1856.709	55751.32	87291.98	363483.99
		END-J	5366.345	5585.400	1856.709	54176.61	98324.88	334172.10
50	BEND	END-I	5643.408	6541.014	2145.769	53878.56	100528.99	333563.44
		CENTER	5089.247	6980.911	2145.769	57463.87	114661.57	289501.23
		END-J	4562.312	7336.057	2145.769	64993.45	130131.36	257531.75
51	BEND	END-I	4569.820	8261.198	2441.975	79059.18	120176.12	258434.87
		CENTER	4247.788	8431.269	2441.975	90188.71	131811.17	238088.67
		END-J	4097.462	8505.389	2441.975	103640.18	143478.11	247287.79
52	TANGENT	END-I	4420.469	8584.692	3972.386	121692.49	78267.75	267463.64
		END-J	4420.469	8584.692	3972.386	121692.49	138440.05	345556.38
53	TANGENT	END-I	4664.317	9003.560	4325.696	121629.81	138412.54	345556.97
		END-J	4664.317	9003.560	4325.696	121629.81	217512.42	401125.23
54	TANGENT	END-I	4937.698	9339.533	4632.969	121944.17	217306.50	481338.77
		END-J	4937.698	9339.533	4632.969	121944.17	308447.19	650009.58
55	TANGENT	END-I	5233.010	9577.129	4900.898	121706.08	308108.85	650214.58
		END-J	5233.010	9577.129	4900.898	121706.08	402961.36	828324.50
56	TANGENT	END-I	5542.490	9710.138	5149.512	121667.43	402973.04	828324.50
		END-J	5542.490	9710.138	5149.512	121667.43	502999.02	1013982.83

57	BEND	END-I	5419.426	8752.015	4246.446	121860.33	423878.34	1049499.32
		CENTER	4788.740	9112.290	4246.446	171614.24	450425.13	1124520.72
		END-J	4279.006	9362.573	4246.446	225630.00	471217.88	1202716.07
58	BEND	END-I	3967.539	9644.480	4537.513	340332.91	396461.42	1202694.05
		CENTER	4137.967	9572.658	4537.513	385446.03	399383.99	1273075.78
		END-J	4529.315	9393.871	4537.513	430476.99	398291.48	1343319.28
59	BEND	END-I	5589.013	8856.507	4826.059	515065.62	279986.33	1343416.66
		CENTER	6339.101	8336.214	4826.059	549407.11	268243.82	1407503.91
		END-J	7082.860	7713.906	4826.059	581068.87	256084.23	1466166.22
60	BEND	END-I	8212.441	6304.611	5277.475	622770.79	167323.95	1461856.03
		CENTER	8919.107	5257.551	5277.475	635326.63	176333.11	1496204.57
		END-J	9377.001	4389.101	5277.475	641847.11	196250.13	1508792.39
61	BEND	END-I	9320.317	4173.860	5521.428	602697.64	294427.14	1508974.68
		CENTER	9060.542	4711.236	5521.428	571006.42	319532.53	1460108.66
		END-J	8639.178	5445.619	5521.428	539018.67	339351.01	1397018.45
62	BEND	END-I	7265.084	7113.866	5596.080	449083.48	441557.17	1400254.06
		CENTER	7079.368	7298.688	5596.080	438334.10	440433.13	1376789.64
		END-J	6889.344	7478.287	5596.080	427973.51	438810.76	1352800.87
63	TANGENT	END-I	6469.564	7778.674	5699.538	402935.26	529495.43	1327801.59
		END-J	6469.564	7778.674	5699.538	402935.26	462145.97	1160913.40
64	TANGENT	END-I	6492.688	7741.124	5779.749	402536.81	459695.04	1162024.22
		END-J	6492.688	7741.124	5779.749	402536.81	422107.35	997627.01
65	BEND	END-I	6519.196	5826.664	7725.270	402997.08	1024160.02	352363.13
		CENTER	6396.482	5961.441	7725.270	453372.56	942951.19	349728.09
		END-J	6264.498	6100.556	7725.270	507444.97	854796.27	353189.25
66	BEND	END-I	5971.655	6421.596	7729.716	628419.70	770222.13	353220.77
		CENTER	5838.086	6543.450	7729.716	678520.45	664918.14	362891.84
		END-J	5713.706	6652.503	7729.716	721150.31	556918.53	379363.76
67	BEND	END-I	5491.933	6855.268	7736.061	795893.40	443607.08	379340.62
		CENTER	5428.104	6905.683	7736.061	818251.44	343374.63	401107.59
		END-J	5390.804	6934.495	7736.061	830154.98	266345.75	428352.34
68	BEND	END-I	5410.388	6939.954	7727.850	829493.32	267917.16	428654.09
		CENTER	5464.308	6897.115	7727.850	816948.63	313880.59	457588.36
		END-J	5544.053	6833.156	7727.850	793552.77	397497.17	489647.14
69	TANGENT	END-I	5796.831	7410.818	6975.451	714485.57	483125.57	532526.37
		END-J	5796.831	7410.818	6975.451	714485.57	528849.84	572785.99

***** COMBINED MODAL RESPONSES FOR SUPPORT GROUP 1 *****
 MODAL COMBINATION METHOD 2-GROUPING

SUPPORT FORCES AND MOMENTS

NODE NUMBER	COMPONENT DIRECTION	FORCE/MOMENT (LOCAL)
7090	FX	3392.
7090	FY	10134.
7090	FZ	2456.
7090	MX	504435.
7090	MY	304979.
7090	MZ	568234.
3047	FZ	32.
3116	FZ	181.
3210	FX	4992.
3210	FZ	81.
3250	FX	6975.
3250	FY	7411.
3250	FZ	5797.
3250	MX	572786.
3250	MY	528850.
3250	MZ	714486.
3035	FY	16817.
3083	FZ	4195.

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SUPPORT GROUP 2

DIRECTION FACTORS

X = 1.0000 Y = 1.0000 Z = 1.0000

INDICATOR FOR DISPLACEMENT OR ACCELERATION SPECTRUM = 2

EQ.0 DISPLACEMENT

EQ.1 ACCELERATION IN IN./SEC.**2

EQ.2 ACCELERATION IN G**S

3 SPECTRA ARE ENTERED FOR CASE 2. KIND= 2

CLUSTER FACTOR, CF = .10000

MODAL PARTICIPATION FACTORS

MODE	FREQ(CPS)	X-DIRECTION	Y-DIRECTION	Z-DIRECTION
1	4.060	8.8310E-01	3.9500E+00	6.0884E-02
2	4.526	1.2696E-01	-4.7752E-03	-3.0735E-01
3	8.853	-1.1363E+00	7.3889E-01	4.9942E-01
4	10.308	1.0905E+00	-8.5582E-01	1.1603E+00
5	15.502	-1.6456E+00	1.8629E-01	1.3842E+00
6	18.727	-5.9810E-01	-3.1543E-02	1.4991E+00
7	23.947	-1.4429E+00	-2.9100E-02	-5.5208E-01
8	34.765	6.2273E-01	1.7556E-01	-5.4590E-01
9	38.358	4.0669E-01	4.9952E-01	1.3721E+00
10	42.006	1.3906E+00	1.0017E+00	-2.9107E-01
11	53.469	-5.5805E-01	5.6204E-01	4.5388E-01
12	55.962	-2.5467E-02	-9.7959E-01	1.2758E-02
13	59.369	-6.9092E-01	-2.3266E-01	2.7493E-01

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SPECTRUM TABLE (GROUP 2 SSE X DIRECTION

NUMBER OF POINTS = 21
SCALE FACTOR = 1.00000E+00

INPUT POINT	PERIOD	SPECTRUM VALUE
1	2.5000E-02	7.5010E-01
2	2.5570E-02	8.4990E-01
3	3.9500E-02	1.2599E+00
4	4.8300E-02	1.6199E+00
5	5.9970E-02	2.4205E+00
6	7.9300E-02	2.4205E+00
7	8.2100E-02	2.3646E+00
8	1.2110E-01	1.2879E+00
9	1.4930E-01	1.2879E+00
10	1.5810E-01	1.2072E+00
11	1.7580E-01	1.2072E+00
12	2.0700E-01	1.0773E+00
13	2.4150E-01	1.1856E+00
14	3.1950E-01	1.1856E+00
15	3.2210E-01	1.1798E+00
16	3.6510E-01	1.1798E+00
17	3.7810E-01	1.1771E+00
18	4.4230E-01	1.1771E+00
19	4.7920E-01	1.1598E+00
20	5.2520E-01	1.1388E+00
21	5.7470E+00	1.0730E-01

SPECTRUM TABLE (GROUP 2 SSE Y DIRECTION

NUMBER OF POINTS = 23
SCALE FACTOR = 1.00000E+00

INPUT POINT	PERIOD	SPECTRUM VALUE
1	2.5000E-02	8.0480E-01
2	2.5560E-02	9.0140E-01
3	3.9530E-02	1.1451E+00
4	4.3480E-02	1.2821E+00
5	5.1110E-02	2.3510E+00
6	5.4350E-02	2.6404E+00
7	5.7500E-02	3.0303E+00
8	6.3000E-02	3.8372E+00
9	8.3330E-02	3.8372E+00
10	1.0000E-01	2.1608E+00
11	1.0950E-01	2.1608E+00
12	1.4490E-01	1.4705E+00
13	1.9497E-01	1.0714E+00
14	2.1740E-01	1.0941E+00
15	2.5210E-01	1.3517E+00
16	3.3333E-01	1.3517E+00
17	3.4840E-01	1.3229E+00
18	3.6230E-01	1.1372E+00
19	4.2589E-01	1.1372E+00
20	4.3478E-01	1.1278E+00
21	5.1150E-01	1.1179E+00
22	5.4765E-01	1.1179E+00
23	5.7470E+00	1.0330E-01

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SPECTRUM TABLE (GROUP 2 SSE Z DIRECTION

NUMBER OF POINTS = 21
SCALE FACTOR = 1.00000E+00

INPUT POINT	PERIOD	SPECTRUM VALUE
1	2.5000E-02	4.1240E-01
2	2.5580E-02	4.1640E-01
3	3.9530E-02	5.8430E-01
4	5.4350E-02	7.6590E-01
5	7.5470E-02	9.0930E-01
6	1.0000E-01	9.0930E-01
7	1.4493E-01	1.0725E+00
8	1.6667E-01	1.0725E+00
9	1.6739E-01	1.0850E+00
10	1.7390E-01	1.1957E+00
11	2.0000E-01	1.1956E+00
12	2.1060E-01	1.2959E+00
13	3.3330E-01	1.2959E+00
14	3.7807E-01	1.0469E+00
15	4.7920E-01	1.0469E+00
16	5.4765E-01	7.0180E-01
17	6.0533E-01	7.0180E-01
18	6.6890E-01	5.7240E-01
19	7.1890E-01	5.7240E-01
20	8.2169E-01	5.5490E-01
21	5.7470E+00	6.5000E-02

CLUSTERING. +1 MEANS MODE I CLOSE TO I+1. -1, NOT.
-1. -1. -1. -1. -1. -1. -1. -1. 1. -1. 1. -1. 0.

***** COMBINED MODAL RESPONSES FOR SUPPORT GROUP 2 *****
 MODAL COMBINATION METHOD 2-GROUPING

NODE NUMBER	DISPLACEMENTS / ROTATIONS						ACCELERATIONS IN G'S		
	X- TRANSLATION	Y- TRANSLATION	Z- TRANSLATION	X- ROTATION	Y- ROTATION	Z- ROTATION	X- DIRECTION	Y- DIRECTION	Z- DIRECTION
7090	.39236E-07	.81913E-07	.29587E-07	.37971E-07	.38948E-07	.46917E-07	.000	.000	.000
3001	.92376E-04	.12911E-03	.87592E-04	.51189E-05	.54007E-05	.56744E-05	.003	.004	.003
3005	.13283E-03	.18389E-03	.13034E-03	.88588E-05	.94750E-05	.94263E-05	.004	.005	.004
3010	.20137E-03	.27610E-03	.20500E-03	.15813E-04	.17161E-04	.16064E-04	.006	.008	.007
3011	.35792E-03	.48668E-03	.38137E-03	.34598E-04	.38235E-04	.32842E-04	.011	.013	.012
3012	.77813E-03	.10327E-02	.90036E-03	.63198E-04	.71218E-04	.55569E-04	.024	.029	.027
3019	.20717E-02	.28986E-02	.28756E-02	.11459E-03	.13113E-03	.81273E-04	.064	.083	.081
3021	.30033E-02	.49072E-02	.53067E-02	.15136E-03	.16911E-03	.77538E-04	.094	.149	.152
3023	.31146E-02	.52406E-02	.57723E-02	.15724E-03	.17467E-03	.74626E-04	.098	.161	.166
3024	.36104E-02	.66118E-02	.81083E-02	.18246E-03	.19625E-03	.55325E-04	.113	.216	.233
3026	.42937E-02	.77366E-02	.11294E-01	.20901E-03	.21358E-03	.51349E-04	.132	.278	.317
3028	.50335E-02	.79214E-02	.14687E-01	.23130E-03	.22152E-03	.11663E-03	.150	.329	.401
3030	.63334E-02	.55337E-02	.20537E-01	.26051E-03	.21527E-03	.31182E-03	.178	.382	.530
3032	.75399E-02	.79378E-02	.25894E-01	.28081E-03	.18751E-03	.58569E-03	.198	.389	.632
3035	.85184E-02	.24872E-01	.30236E-01	.29604E-03	.14403E-03	.93487E-03	.210	.375	.700
3037	.91752E-02	.53177E-01	.33174E-01	.31625E-03	.94384E-04	.12981E-02	.213	.393	.738
3038	.94534E-02	.90563E-01	.34473E-01	.34467E-03	.64601E-04	.16156E-02	.213	.440	.750
3040	.93287E-02	.13570E+00	.34070E-01	.37775E-03	.92251E-04	.18896E-02	.209	.505	.739
3044	.91686E-02	.15542E+00	.33461E-01	.39180E-03	.11246E-03	.19868E-02	.205	.533	.730
3047	.90715E-02	.16541E+00	.33076E-01	.39878E-03	.12286E-03	.20320E-02	.203	.547	.724
3050	.89673E-02	.17480E+00	.32675E-01	.40531E-03	.13257E-03	.20724E-02	.201	.560	.718
3053	.89115E-02	.18314E+00	.32253E-01	.41102E-03	.14108E-03	.21066E-02	.199	.571	.712
3056	.92630E-02	.19701E+00	.31257E-01	.42017E-03	.15498E-03	.21612E-02	.195	.589	.696
3059	.94547E-02	.19953E+00	.31028E-01	.42178E-03	.15750E-03	.21708E-02	.194	.592	.693
3062	.10866E-01	.20974E+00	.29962E-01	.42820E-03	.16775E-03	.22093E-02	.191	.605	.676
3065	.1674E-01	.22878E+00	.27438E-01	.43964E-03	.18695E-03	.22783E-02	.188	.628	.635
3068	.21845E-01	.23832E+00	.25809E-01	.44523E-03	.19714E-03	.23130E-02	.189	.639	.608
3071	.36205E-01	.25765E+00	.21813E-01	.45622E-03	.21900E-03	.23833E-02	.199	.660	.543
3074	.39588E-01	.26089E+00	.20970E-01	.45810E-03	.22320E-03	.23960E-02	.202	.663	.530
3077	.43109E-01	.26410E+00	.20107E-01	.45995E-03	.22744E-03	.24086E-02	.206	.667	.516
3080	.94354E-01	.29595E+00	.92377E-02	.47828E-03	.27939E-03	.25482E-02	.287	.698	.350
3083	.12824E+00	.30170E+00	.60686E-02	.48541E-03	.30802E-03	.26137E-02	.349	.703	.287
3086	.13791E+00	.30168E+00	.63806E-02	.48714E-03	.31595E-03	.26311E-02	.367	.703	.277
3089	.16386E+00	.30165E+00	.91616E-02	.49090E-03	.33729E-03	.26754E-02	.412	.703	.267
3092	.21377E+00	.30157E+00	.17221E-01	.49464E-03	.37880E-03	.27544E-02	.494	.703	.302
3095	.24685E+00	.30151E+00	.22934E-01	.49482E-03	.40635E-03	.28024E-02	.544	.702	.347
3098	.25192E+00	.30151E+00	.23813E-01	.49471E-03	.41058E-03	.28096E-02	.551	.702	.355
3100	.31031E+00	.30140E+00	.33848E-01	.49115E-03	.45908E-03	.28873E-02	.631	.702	.450
3101	.37018E+00	.30128E+00	.43831E-01	.48429E-03	.50842E-03	.29607E-02	.708	.702	.543
3104	.37241E+00	.30128E+00	.44195E-01	.48399E-03	.51026E-03	.29634E-02	.711	.702	.546
3107	.40483E+00	.30120E+00	.49428E-01	.47949E-03	.53674E-03	.30013E-02	.753	.701	.593
3110	.45380E+00	.29665E+00	.56740E-01	.47283E-03	.57606E-03	.30582E-02	.819	.697	.648
3113	.49713E+00	.27898E+00	.61940E-01	.46765E-03	.61064E-03	.31132E-02	.879	.678	.656
3115	.55440E+00	.22865E+00	.67133E-01	.46209E-03	.65982E-03	.32081E-02	.962	.623	.592
3116	.58849E+00	.14186E+00	.69630E-01	.46007E-03	.70717E-03	.33327E-02	1.011	.536	.423
3119	.58823E+00	.96958E-01	.70457E-01	.46080E-03	.72645E-03	.33948E-02	1.011	.499	.337
3120	.58788E+00	.48349E-01	.73677E-01	.46390E-03	.74669E-03	.34732E-02	1.010	.468	.285
3122	.58752E+00	.55509E-01	.79227E-01	.46940E-03	.76211E-03	.35507E-02	1.010	.463	.327
3123	.57522E+00	.13054E+00	.88720E-01	.47981E-03	.77605E-03	.36515E-02	.992	.503	.467
3125	.52908E+00	.19881E+00	.96165E-01	.49022E-03	.78446E-03	.37331E-02	.926	.565	.580
3128	.44988E+00	.24851E+00	.10048E+00	.49959E-03	.78942E-03	.37913E-02	.811	.618	.633
3198	.36615E+00	.25894E+00	.98974E-01	.50492E-03	.79051E-03	.38044E-02	.683	.629	.601
3199	.29020E+00	.24723E+00	.94461E-01	.50716E-03	.78961E-03	.37786E-02	.559	.617	.542
3200	.21506E+00	.23564E+00	.90828E-01	.50671E-03	.78806E-03	.37142E-02	.427	.605	.514
3205	.13927E+00	.22383E+00	.88181E-01	.50336E-03	.78540E-03	.36057E-02	.286	.592	.529
3208	.68163E-01	.21278E+00	.86890E-01	.49763E-03	.78147E-03	.34581E-02	.150	.579	.589
3210	.88534E-03	.20224E+00	.86961E-01	.49031E-03	.77598E-03	.32684E-02	.075	.563	.684
3212	.67344E-01	.18311E+00	.86721E-01	.48268E-03	.76860E-03	.30160E-02	.211	.525	.804

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3215	.11052E+00	.14036E+00	.80891E-01	.47856E-03	.75860E-03	.27390E-02			
3220	.12779E+00	.81440E-01	.69546E-01	.48081E-03	.73222E-03	.23821E-02	.323	.429	.881
3222	.10467E+00	.15950E-01	.49445E-01	.49362E-03	.64962E-03	.18337E-02	.369	.295	.910
3225	.67106E-01	.11320E-01	.33836E-01	.49176E-03	.54554E-03	.14109E-02	.318	.200	.830
3230	.58318E-01	.11018E-01	.30620E-01	.48575E-03	.51798E-03	.13135E-02	.253	.200	.653
3235	.33758E-01	.86035E-02	.20930E-01	.44897E-03	.42903E-03	.10147E-02	.240	.197	.598
3237	.15236E-01	.75417E-02	.12148E-01	.38784E-03	.34364E-03	.75400E-03	.195	.184	.415
3238	.55845E-02	.68447E-02	.66426E-02	.32672E-03	.27961E-03	.58446E-03	.146	.171	.246
3240	.10852E-02	.47257E-02	.26787E-02	.25137E-03	.20449E-03	.42021E-03	.107	.152	.138
3243	.10125E-02	.21649E-02	.58722E-03	.16211E-03	.12436E-03	.25384E-03	.065	.106	.058
3245	.30834E-03	.35596E-03	.17795E-04	.60880E-04	.44668E-04	.88672E-04	.028	.051	.013
3250	.56098E-07	.61492E-07	.44927E-07	.52643E-07	.39760E-07	.57416E-07	.005	.010	.000
							.000	.000	.000

***** COMBINED MODAL RESPONSES FOR SUPPORT GROUP 2 *****
 MODAL COMBINATION METHOD 2-GROUPING

PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
1	TANGENT	END-I	4382.400	7616.890	3790.625	108658.90	428834.37	566487.33
		END-J	4382.400	7616.890	3790.625	108658.90	361151.97	423909.58
2	TANGENT	END-I	4380.205	7617.834	3790.184	108547.34	361175.00	423918.53
		END-J	4380.205	7617.834	3790.184	108547.34	345153.22	389756.13
3	TANGENT	END-I	4380.170	7617.396	3788.815	108547.34	345153.22	389756.13
		END-J	4380.170	7617.396	3788.815	108547.34	329237.40	355606.21
4	TANGENT	END-I	4377.508	7623.551	3777.111	110100.01	329392.37	354984.58
		END-J	4377.508	7623.551	3777.111	110100.01	311458.09	316077.29
5	TANGENT	END-I	4383.175	7617.936	3777.578	109827.18	311352.83	316275.77
		END-J	4383.175	7617.936	3777.578	109827.18	281731.62	251228.09
6	BEND	END-I	4378.010	7376.176	4167.096	109206.61	290118.35	240438.70
		CENTER	3922.519	7627.472	4167.096	108696.83	254303.70	174746.70
		END-J	3536.399	7814.019	4167.096	112089.57	218031.49	112558.46
7	BEND	END-I	3184.761	7900.129	4227.150	120479.92	212003.44	115326.77
		CENTER	3128.936	7922.349	4227.150	127102.32	181144.27	79495.67
		END-J	3202.637	7892.835	4227.150	132218.92	154293.54	85708.54
8	BEND	END-I	3441.709	7470.515	4727.305	138042.29	142972.88	95595.83
		CENTER	3489.997	7448.446	4727.305	138627.63	140142.37	99413.06
		END-J	3540.580	7424.907	4727.305	139120.97	137749.22	104133.47
9	TANGENT	END-I	3601.917	8169.128	3183.433	139590.65	149191.27	86173.77
		END-J	3601.917	8169.128	3183.433	139590.65	110288.80	190069.45
10	TANGENT	END-I	3587.621	8156.897	3077.525	139441.32	110288.80	190178.98
		END-J	3587.621	8156.897	3077.525	139441.32	67011.00	317289.46
11	TANGENT	END-I	3570.499	8142.594	2922.126	139441.32	67011.00	317289.46
		END-J	3570.499	8142.594	2922.126	139441.32	37416.29	444331.32
12	TANGENT	END-I	3546.462	8127.403	2659.599	139735.12	37416.29	444239.15
		END-J	3546.462	8127.403	2659.599	139735.12	68155.81	660910.55
13	TANGENT	END-I	3516.898	8126.877	2224.284	140069.69	68155.81	660839.88
		END-J	3516.898	8126.877	2224.284	140069.69	121195.50	877120.72
14	TANGENT	END-I	3488.489	8160.277	1719.502	139765.62	121195.50	877169.23
		END-J	3488.489	8160.277	1719.502	139765.62	163114.16	1093958.49
15	TANGENT	END-I	3460.064	5924.003	1211.588	139678.20	163114.16	1093969.61
		END-J	3460.064	5924.003	1211.588	139678.20	190095.12	960543.14
16	TANGENT	END-I	3432.040	5735.375	851.469	140089.72	190095.12	960483.23
		END-J	3432.040	5735.375	851.469	140089.72	201257.69	837398.85
17	TANGENT	END-I	3404.538	5468.466	915.732	139799.19	201257.69	837447.33
		END-J	3404.538	5468.466	915.732	139799.19	197237.09	728045.20
18	TANGENT	END-I	3385.828	5221.143	1183.719	140184.11	197237.09	727971.20
		END-J	3385.828	5221.143	1183.719	140184.11	192031.45	689336.38
19	TANGENT	END-I	3375.020	5107.176	1333.186	136975.78	192031.45	689981.30

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		END-J	3375.020	5107.176	1333.186	136975.78	188818.26	672179.02
20	TANGENT	END-I	3371.789	5032.415	1407.923	140008.03	188818.26	671553.63
		END-J	3371.789	5032.415	1407.923	140008.03	185654.66	655771.16
21	BEND	END-I	3367.945	4962.753	1492.231	140465.89	185654.66	655673.10
		CENTER	3367.774	4962.781	1492.231	139497.58	184870.02	648939.88
		END-J	3369.652	4961.522	1492.231	138603.80	184055.08	642188.10
22	BEND	END-I	3366.588	4885.633	1556.814	137753.14	193991.44	639445.34
		CENTER	3377.351	4878.146	1556.814	137348.87	191489.62	628187.76
		END-J	3393.364	4867.142	1556.814	137170.14	188908.18	616895.59
23	BEND	END-I	3409.029	3943.955	3162.979	140779.90	325545.32	556105.22
		CENTER	3409.579	3943.464	3162.979	138749.69	325179.65	554333.90
		END-J	3410.227	3943.024	3162.979	136729.42	324804.00	552559.65
24	BEND	END-I	3416.666	4729.674	1681.715	139017.75	200637.62	608235.90
		CENTER	3436.716	4715.134	1681.715	140111.60	197500.93	599686.81
		END-J	3458.994	4698.787	1681.715	141302.15	194330.08	591128.81
25	BEND	END-I	3445.243	4559.914	1859.697	139034.12	177629.71	596883.77
		CENTER	3487.041	4527.992	1859.697	139226.24	172809.49	580567.21
		END-J	3535.448	4490.667	1859.697	139677.85	168058.37	564224.64
26	BEND	END-I	3557.299	4305.773	2038.548	148380.72	172873.37	560532.71
		CENTER	3581.235	4286.060	2038.548	147312.16	171163.12	551853.17
		END-J	3606.224	4265.319	2038.548	146307.04	169501.03	543172.01
27	BEND	END-I	3559.237	4166.070	2122.902	146742.39	163140.99	545041.78
		CENTER	3617.026	4116.126	2122.902	149197.37	155460.75	526439.00
		END-J	3677.452	4062.115	2122.902	151556.00	148429.65	507886.57
28	BEND	END-I	3664.106	3710.730	2566.335	149289.56	200425.25	490452.24
		CENTER	3677.244	3697.547	2566.335	151082.02	197647.45	487147.49
		END-J	3690.350	3684.402	2566.335	152850.46	194880.59	483846.96
29	BEND	END-I	3668.024	3894.541	2217.919	155579.89	164012.62	494207.86
		CENTER	3676.669	3886.195	2217.919	155244.95	163444.03	490713.23
		END-J	3685.427	3877.823	2217.919	154911.99	162902.26	487223.62
30	BEND	END-I	3500.055	3710.823	2470.754	155685.93	139767.81	494164.79
		CENTER	3595.603	3617.063	2470.754	158882.37	129296.05	452804.62
		END-J	3690.729	3519.918	2470.754	159998.04	129609.49	412747.01
31	BEND	END-I	3393.057	3260.754	2704.792	157362.14	123449.66	415639.36
		CENTER	3424.089	3229.270	2704.792	157107.79	129962.13	396989.21
		END-J	3452.634	3199.738	2704.792	156301.04	139506.19	379365.92
32	TANGENT	END-I	3295.469	1658.893	2867.709	154798.41	388350.60	113998.53
		END-J	3295.469	1658.893	2867.709	154798.41	380007.02	111450.35
33	TANGENT	END-I	3150.407	1635.669	2824.786	152670.40	380864.14	111450.35
		END-J	3150.407	1635.669	2824.786	152670.40	359761.63	106231.80
34	TANGENT	END-I	2857.351	1557.281	2725.506	153874.05	359250.15	106231.80
		END-J	2857.351	1557.281	2725.506	153874.05	324197.97	103170.40
35	TANGENT	END-I	2552.332	1429.499	2598.035	153502.13	324373.69	103170.40
		END-J	2552.332	1429.499	2598.035	153502.13	305769.55	105002.13
36	TANGENT	END-I	2420.562	1356.862	2536.811	154225.92	305406.06	105002.13
		END-J	2420.562	1356.862	2536.811	154225.92	302903.69	105480.22
37	TANGENT	END-I	2213.194	1241.544	2445.971	153774.61	303132.55	105480.22
		END-J	2213.194	1241.544	2445.971	153774.61	281198.48	113084.11

38	TANGENT	END-I	1873.321	964.469	2277.525	153877.70	281142.20	113084.11
		END-J	1873.321	964.469	2277.525	153877.70	272907.61	121001.92
39	TANGENT	END-I	1733.112	779.886	2200.906	159822.90	269468.47	121001.92
		END-J	1733.112	779.886	2200.906	159822.90	269452.17	121251.19
40	TANGENT	END-I	1656.624	708.186	2170.254	154175.48	272723.57	121251.19
		END-J	1656.624	708.186	2170.254	154175.48	274715.35	124039.71
41	BEND	END-I	1531.150	2125.382	520.220	154047.11	123890.54	274861.52
		CENTER	1546.296	2114.488	520.220	149180.59	130357.94	279913.59
		END-J	1572.184	2095.322	520.220	143714.21	137250.00	286325.22
42	BEND	END-I	1580.552	2054.227	430.593	136050.17	144520.66	286493.17
		CENTER	1630.945	2014.497	430.593	130542.08	148267.00	295299.81
		END-J	1685.822	1968.839	430.593	125092.95	151731.18	304515.78
43	BEND	END-I	1926.334	1954.920	632.769	118309.92	157484.76	304307.67
		CENTER	2032.743	1844.047	632.769	111028.05	156214.05	320065.51
		END-J	2127.559	1733.787	632.769	105469.68	153757.14	334663.25
44	BEND	END-I	2744.846	1748.322	1061.989	101417.14	155866.29	334941.07
		CENTER	2796.725	1663.788	1061.989	100842.67	142703.74	344514.39
		END-J	2800.120	1657.947	1061.989	101824.09	129767.44	349685.61
45	TANGENT	END-I	3262.389	2012.734	1271.222	104715.47	118526.28	352816.82
		END-J	3262.389	2012.734	1271.222	104715.47	106813.98	345022.04
46	TANGENT	END-I	3704.203	2195.717	1383.875	104713.93	106813.98	345022.44
		END-J	3704.203	2195.717	1383.875	104713.93	93105.61	335871.18
47	TANGENT	END-I	4230.795	2382.703	1422.456	104714.06	93105.61	335871.20
		END-J	4230.795	2382.703	1422.456	104714.06	83356.00	329971.08
48	BEND	END-I	4876.481	2602.098	1337.934	104713.19	73235.19	332368.87
		CENTER	4753.613	2820.354	1337.934	99413.74	77856.68	327736.54
		END-J	4570.029	3109.100	1337.934	91545.26	89411.82	318988.03
49	BEND	END-I	4992.487	3787.570	1151.962	78907.52	100837.96	318957.12
		CENTER	4695.786	4149.922	1151.962	68894.16	111323.60	296962.93
		END-J	4361.657	4500.112	1151.962	58053.39	122464.79	274104.64
50	BEND	END-I	4584.086	5271.047	942.998	44906.49	128270.64	273916.71
		CENTER	4135.019	5630.108	942.998	38455.83	132821.79	238805.16
		END-J	3706.253	5921.203	942.998	38767.57	136349.85	213112.02
51	BEND	END-I	3707.540	6672.629	821.404	49965.90	132320.97	213321.82
		CENTER	3439.516	6814.526	821.404	60955.75	126898.69	195635.33
		END-J	3308.884	6878.989	821.404	72685.60	120562.83	201324.84
52	TANGENT	END-I	3569.401	6909.076	2591.590	87660.50	109824.61	201477.36
		END-J	3569.401	6909.076	2591.590	87660.50	115601.03	260335.43
53	TANGENT	END-I	3781.909	7240.306	2809.201	87682.05	116003.24	260147.82
		END-J	3781.909	7240.306	2809.201	87682.05	141991.39	368624.00
54	TANGENT	END-I	4023.076	7506.581	2979.958	87860.02	141810.48	368651.25
		END-J	4023.076	7506.581	2979.958	87860.02	184585.16	504207.26
55	TANGENT	END-I	4286.615	7693.597	3111.528	87703.15	183892.30	504487.66
		END-J	4286.615	7693.597	3111.528	87703.15	235074.71	647520.53
56	TANGENT	END-I	4563.595	7796.093	3235.072	87688.20	235080.37	647520.53
		END-J	4563.595	7796.093	3235.072	87688.20	292528.19	796428.65

57	BEND	END-I	4410.865	7146.346	1854.328	87604.96	124183.48	839323.08
		CENTER	3822.277	7477.572	1854.328	96481.14	130177.79	897640.60
		END-J	3318.350	7714.555	1854.328	105872.30	137897.77	959189.03
58	BEND	END-I	2924.352	7999.955	2133.262	126858.88	119137.71	959156.60
		CENTER	3038.812	7957.451	2133.262	135463.63	126703.33	1015587.31
		END-J	3372.754	7821.913	2133.262	144485.65	135331.21	1072562.89
59	BEND	END-I	4322.448	7387.197	2510.607	161838.34	112812.48	1072689.88
		CENTER	4992.448	6952.154	2510.607	169777.13	122497.89	1125805.36
		END-J	5656.010	6423.038	2510.607	178465.80	133502.13	1174995.46
60	BEND	END-I	6673.884	5285.513	3067.662	193644.29	145027.31	1171220.03
		CENTER	7311.613	4360.885	3067.662	215830.24	147761.33	1201830.49
		END-J	7739.820	3545.730	3067.662	238787.77	153850.83	1214945.10
61	BEND	END-I	7765.190	3182.134	3627.369	268921.18	88535.49	1215164.18
		CENTER	7571.473	3618.838	3627.369	273783.67	101809.47	1177176.15
		END-J	7237.050	4248.275	3627.369	278490.18	121959.00	1127275.56
62	BEND	END-I	6090.190	5719.884	3848.322	274325.24	101447.41	1130324.28
		CENTER	5934.288	5881.409	3848.322	273628.50	107222.23	1111364.37
		END-J	5774.075	6038.842	3848.322	272968.16	113195.60	1091959.72
63	TANGENT	END-I	5408.867	6297.924	4094.554	269028.85	250224.77	1069902.47
		END-J	5408.867	6297.924	4094.554	269028.85	261650.12	935672.40
64	TANGENT	END-I	5420.600	6274.193	4301.312	268732.76	258570.98	936613.16
		END-J	5420.600	6274.193	4301.312	268732.76	302969.46	804806.31
65	BEND	END-I	5438.702	4410.602	6265.827	269010.62	825495.26	240648.85
		CENTER	5437.613	4413.854	6265.827	316566.25	759914.40	272550.16
		END-J	5421.361	4435.725	6265.827	366359.86	688518.19	304794.13
66	BEND	END-I	5339.384	4598.346	6271.596	475081.49	618599.44	304639.72
		CENTER	5280.269	4667.077	6271.596	519563.54	531934.68	335580.80
		END-J	5210.737	4745.008	6271.596	557420.69	442220.89	366601.01
67	BEND	END-I	5024.274	4970.947	6278.097	624456.05	341146.16	366534.24
		CENTER	4936.432	5057.311	6278.097	645090.52	251155.72	394498.87
		END-J	4848.744	5140.114	6278.097	656998.47	175082.66	422800.59
68	BEND	END-I	4666.993	5324.721	6271.174	661006.09	158581.85	423065.14
		CENTER	4601.098	5380.010	6271.174	652623.14	203105.92	447005.65
		END-J	4550.143	5423.229	6271.174	635260.48	281123.06	471447.45
69	TANGENT	END-I	4492.678	6149.201	5609.766	574158.26	354678.20	499394.08
		END-J	4492.678	6149.201	5609.766	574158.26	397597.49	526432.06

***** COMBINED MODAL RESPONSES FOR SUPPORT GROUP 2 *****
 MODAL COMBINATION METHOD 2-GROUPING

SUPPORT FORCES AND MOMENTS

NODE NUMBER	COMPONENT DIRECTION	FORCE/MOMENT (LOCAL)
7090	FX	3924.
7090	FY	8191.
7090	FZ	2959.
7090	MX	379707.
7090	MY	389486.
7090	MZ	469177.
3047	FZ	20.
3116	FZ	42.
3210	FX	4427.
3210	FZ	52.
3250	FX	5510.
3250	FY	6149.
3250	FZ	4493.
3250	MX	526432.
3250	MY	397597.
3250	MZ	574158.
3035	FY	13717.
3083	FZ	3347.

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SUPPORT GROUP 3

DIRECTION FACTORS

X = 1.0000 Y = 1.0000 Z = 1.0000

INDICATOR FOR DISPLACEMENT OR ACCELERATION SPECTRUM = 2

EQ.0 DISPLACEMENT
EQ.1 ACCELERATION IN IN./SEC.**2
EQ.2 ACCELERATION IN G**S

3 SPECTRA ARE ENTERED FOR CASE 3. KIND= 2
CLUSTER FACTOR, CF = .10000

MODAL PARTICIPATION FACTORS

MODE	FREQ (CPS)	X-DIRECTION	Y-DIRECTION	Z-DIRECTION
1	4.060	2.5439E+00	1.3666E+00	-5.3159E-01
2	4.526	7.8047E-01	-1.2556E+00	3.3112E+00
3	8.853	1.1566E-01	-1.8595E+00	3.1423E+00
4	10.308	1.6726E+00	3.9590E+00	1.0371E+00
5	15.502	-1.6692E-01	-3.0651E-01	-1.7527E+00
6	18.727	-5.7974E-02	-2.1615E-01	9.9878E-01
7	23.947	5.2531E-01	2.1390E+00	5.3059E-01
8	34.765	6.7216E-02	5.9481E-01	-8.7274E-01
9	38.358	1.4866E-01	9.1164E-01	-2.8213E-01
10	42.006	3.4632E-02	-4.8341E-02	5.1463E-01
11	3.469	-5.5672E-01	-1.6966E+00	-4.7823E-02
12	55.962	-4.1383E-01	-8.0582E-01	1.2205E-01
13	59.369	9.2714E-01	6.9743E-01	7.1186E-01

811-V

SPECTRUM TABLE (GROUP 3 SSE X DIRECTION

NUMBER OF POINTS = 22
SCALE FACTOR = 1.00000E+00

INPUT POINT	PERIOD	SPECTRUM VALUE
1	2.5000E-02	8.3890E-01
2	2.5580E-02	9.6750E-01
3	3.9890E-02	1.5641E+00
4	4.3500E-02	1.5643E+00
5	5.1150E-02	2.0854E+00
6	5.9970E-02	2.6388E+00
7	7.9310E-02	2.6388E+00
8	1.0000E-01	1.6898E+00
9	1.2105E-01	1.3854E+00
10	1.4560E-01	1.3854E+00
11	1.5810E-01	1.2671E+00
12	1.7164E-01	1.2671E+00
13	1.7970E-01	1.1769E+00
14	2.1210E-01	1.1141E+00
15	2.4150E-01	1.2187E+00
16	3.2210E-01	1.2025E+00
17	3.6496E-01	1.2025E+00
18	3.7807E-01	1.1914E+00
19	4.4230E-01	1.1914E+00
20	4.7920E-01	1.1535E+00
21	5.2520E-01	1.1535E+00
22	5.7470E+00	1.0730E-01

SPECTRUM TABLE (GROUP 3 SSE Y DIRECTION

NUMBER OF POINTS = 23

SCALE FACTOR = 1.00000E+00

INPUT POINT	PERIOD	SPECTRUM VALUE
1	2.5000E-02	6.8940E-01
2	2.5580E-02	7.4760E-01
3	3.9530E-02	1.0095E+00
4	4.8310E-02	1.6190E+00
5	5.2270E-02	1.9835E+00
6	5.7500E-02	2.5869E+00
7	6.3000E-02	3.1382E+00
8	8.3330E-02	3.1382E+00
9	1.0230E-01	2.0918E+00
10	1.1500E-01	2.0918E+00
11	1.2420E-01	1.8889E+00
12	1.5230E-01	1.4120E+00
13	1.8120E-01	1.0999E+00
14	1.9760E-01	1.1057E+00
15	2.1210E-01	1.1057E+00
16	2.1739E-01	1.1257E+00
17	2.5208E-01	1.4190E+00
18	3.3330E-01	1.4190E+00
19	3.7807E-01	1.1849E+00
20	5.0000E-01	1.1849E+00
21	5.1150E-01	1.1719E+00
22	5.4765E-01	1.1719E+00
23	5.7470E+00	1.0350E-01

611-V

SPECTRUM TABLE (GROUP 3 SSE Z DIRECTION)

NUMBER OF POINTS = 23
SCALE FACTOR = 1.00000E+00

INPUT POINT	PERIOD	SPECTRUM VALUE
1	2.5000E-02	3.7960E-01
2	2.5580E-02	3.8410E-01
3	3.4780E-02	5.2000E-01
4	3.8730E-02	5.2000E-01
5	4.9100E-02	6.2430E-01
6	5.9970E-02	7.3890E-01
7	6.4940E-02	7.3890E-01
8	7.3460E-02	8.9330E-01
9	9.5830E-02	8.9330E-01
10	1.0000E-01	8.7670E-01
11	1.1995E-01	8.7030E-01
12	1.3296E-01	9.6820E-01
13	1.3910E-01	9.6820E-01
14	1.4493E-01	1.0368E+00
15	1.6739E-01	1.0368E+00
16	1.7390E-01	1.1315E+00
17	1.8904E-01	1.1502E+00
18	1.9763E-01	1.1502E+00
19	2.4150E-01	1.1996E+00
20	3.1950E-01	1.1996E+00
21	3.9530E-01	9.1360E-01
22	4.7920E-01	9.1360E-01
23	5.7470E+00	6.5000E-02

CLAUSTRING. +1 MEANS MODE I CLOSE TO I+1. -1, NOT.
-1. -1. -1. -1. -1. -1. -1. -1. 1. -1. 1. -1. 0.

***** COMBINED MODAL RESPONSES FOR SUPPORT GROUP 3 *****
 MODAL COMBINATION METHOD 2-GROUPING

NODE NUMBER	DISPLACEMENTS / ROTATIONS						ACCELERATIONS IN G'S		
	X- TRANSLATION	Y- TRANSLATION	Z- TRANSLATION	X- ROTATION	Y- ROTATION	Z- ROTATION	X- DIRECTION	Y- DIRECTION	Z- DIRECTION
7090	.52102E-07	.66715E-07	.47573E-07	.50158E-07	.48146E-07	.34196E-07	.000	.000	.000
3001	.68807E-04	.91558E-04	.10956E-03	.73261E-05	.65893E-05	.43346E-05	.002	.003	.003
3005	.10152E-03	.13092E-03	.16885E-03	.13135E-04	.11754E-04	.73318E-05	.003	.004	.004
3010	.15874E-03	.19752E-03	.27550E-03	.24339E-04	.21661E-04	.12779E-04	.004	.006	.006
3011	.29318E-03	.35010E-03	.53458E-03	.55889E-04	.49334E-04	.27062E-04	.007	.010	.011
3012	.69476E-03	.75482E-03	.13571E-02	.10724E-03	.93938E-04	.48007E-04	.015	.021	.024
3019	.21275E-02	.21423E-02	.46547E-02	.21583E-03	.18082E-03	.81814E-04	.039	.062	.070
3021	.33745E-02	.35490E-02	.85667E-02	.31411E-03	.24412E-03	.10150E-03	.057	.111	.124
3023	.35399E-02	.37731E-02	.92664E-02	.33196E-03	.25447E-03	.10449E-03	.060	.120	.134
3024	.42991E-02	.47166E-02	.12779E-01	.41473E-03	.29803E-03	.11846E-03	.070	.162	.183
3026	.53846E-02	.56121E-02	.17755E-01	.51563E-03	.34094E-03	.14491E-03	.083	.210	.244
3028	.66114E-02	.61654E-02	.23314E-01	.61676E-03	.37322E-03	.19208E-03	.096	.248	.304
3030	.89284E-02	.75862E-02	.33672E-01	.79957E-03	.40604E-03	.33132E-03	.116	.286	.400
3032	.11365E-01	.14330E-01	.44462E-01	.96624E-03	.41523E-03	.54140E-03	.132	.304	.483
3035	.13762E-01	.29356E-01	.55068E-01	.11448E-02	.40840E-03	.81789E-03	.144	.352	.552
3037	.16013E-01	.53895E-01	.65028E-01	.13247E-02	.39623E-03	.10929E-02	.155	.491	.609
3038	.18059E-01	.85038E-01	.74057E-01	.15028E-02	.39217E-03	.13024E-02	.164	.682	.851
3040	.19876E-01	.12076E+00	.82112E-01	.16793E-02	.40916E-03	.24561E-02	.168	.881	.671
3044	.20542E-01	.13577E+00	.85067E-01	.17488E-02	.42340E-03	.15045E-02	.168	.955	.671
3047	.20850E-01	.14324E+00	.86471E-01	.17827E-02	.43194E-03	.15261E-02	.168	.990	.670
3050	.21138E-01	.15019E+00	.87748E-01	.18140E-02	.44073E-03	.15450E-02	.168	1.020	.667
3053	.21386E-01	.15630E+00	.88678E-01	.18412E-02	.44919E-03	.15608E-02	.167	1.046	.663
3056	.21807E-01	.16636E+00	.89019E-01	.18857E-02	.46515E-03	.15856E-02	.167	1.086	.649
3059	.21898E-01	.16817E+00	.88876E-01	.18937E-02	.46835E-03	.15900E-02	.167	1.093	.645
3062	.22383E-01	.17547E+00	.87720E-01	.19260E-02	.48216E-03	.16074E-02	.169	1.120	.626
3065	.24238E-01	.18886E+00	.83311E-01	.19862E-02	.51153E-03	.16391E-02	.172	1.164	.576
3068	.26143E-01	.19549E+00	.79492E-01	.20170E-02	.52877E-03	.16555E-02	.175	1.184	.542
3071	.32893E-01	.20873E+00	.68651E-01	.20821E-02	.56905E-03	.16902E-02	.186	1.220	.458
3074	.34692E-01	.21093E+00	.66009E-01	.20940E-02	.57722E-03	.16967E-02	.189	1.225	.440
3077	.36631E-01	.21309E+00	.63248E-01	.21059E-02	.58555E-03	.17033E-02	.192	1.230	.422
3080	.68559E-01	.23430E+00	.21971E-01	.22472E-02	.69482E-03	.17842E-02	.256	1.271	.228
3083	.91148E-01	.23818E+00	.92401E-02	.23196E-02	.75742E-03	.18281E-02	.309	1.279	.229
3086	.97677E-01	.23824E+00	.17180E-01	.23392E-02	.77470E-03	.18402E-02	.324	1.280	.248
3089	.11533E+00	.23836E+00	.40023E-01	.23874E-02	.82138E-03	.18724E-02	.365	1.283	.322
3092	.14967E+00	.23864E+00	.84753E-01	.24640E-02	.91141E-03	.19319E-02	.439	1.289	.500
3095	.17262E+00	.23881E+00	.11447E+00	.25040E-02	.97096E-03	.19687E-02	.483	1.293	.623
3098	.17614E+00	.23884E+00	.11903E+00	.25094E-02	.98006E-03	.19741E-02	.489	1.294	.642
3100	.21692E+00	.23915E+00	.17130E+00	.25603E-02	.10843E-02	.20332E-02	.552	1.300	.854
3101	.25897E+00	.23946E+00	.22436E+00	.25925E-02	.11897E-02	.20876E-02	.604	1.307	1.061
3104	.26054E+00	.23948E+00	.22632E+00	.25933E-02	.11936E-02	.20896E-02	.606	1.307	1.069
3107	.28337E+00	.23965E+00	.25472E+00	.26033E-02	.12499E-02	.21172E-02	.630	1.310	1.178
3110	.31794E+00	.23736E+00	.29748E+00	.26115E-02	.13331E-02	.21584E-02	.666	1.317	1.324
3113	.34856E+00	.22752E+00	.33600E+00	.26137E-02	.14055E-02	.21988E-02	.700	1.325	1.405
3115	.38914E+00	.19961E+00	.38904E+00	.26108E-02	.15065E-02	.22708E-02	.748	1.332	1.421
3116	.41340E+00	.15503E+00	.42823E+00	.26032E-02	.16005E-02	.23692E-02	.780	1.314	1.263
3119	.41333E+00	.13566E+00	.43566E+00	.25992E-02	.16373E-02	.24185E-02	.783	1.294	1.147
3120	.41322E+00	.11950E+00	.44656E+00	.25954E-02	.16746E-02	.24787E-02	.788	1.264	1.038
3122	.41310E+00	.11782E+00	.45916E+00	.25929E-02	.17015E-02	.25353E-02	.792	1.232	.994
3123	.40470E+00	.14044E+00	.47054E+00	.25912E-02	.17229E-02	.26025E-02	.794	1.195	1.043
3125	.37273E+00	.17338E+00	.45893E+00	.25872E-02	.17335E-02	.26503E-02	.781	1.176	1.162
3128	.31785E+00	.20148E+00	.42519E+00	.25709E-02	.17387E-02	.26794E-02	.748	1.175	1.299
3198	.25975E+00	.20748E+00	.38019E+00	.25365E-02	.17399E-02	.26838E-02	.689	1.178	1.342
3199	.20681E+00	.19977E+00	.33438E+00	.24831E-02	.17398E-02	.26701E-02	.606	1.171	1.317
3200	.15412E+00	.19198E+00	.29121E+00	.24097E-02	.17395E-02	.26393E-02	.496	1.159	1.299
3205	.10046E+00	.18384E+00	.25062E+00	.23112E-02	.17383E-02	.25895E-02	.352	1.142	1.292
3208	.49369E-01	.17598E+00	.21664E+00	.21927E-02	.17350E-02	.25248E-02	.186	1.119	1.299
3210	.20569E-02	.16819E+00	.18992E+00	.20512E-02	.17291E-02	.24461E-02	.093	1.089	1.321
3212	.51715E-01	.15353E+00	.16720E+00	.18669E-02	.17217E-02	.23358E-02	.325	1.019	1.329

3215	.85203E-01	.11983E+00	.14366E+00	.16528E-02	.17099E-02	.21865E-02	.508	.832	1.228
3220	.98606E-01	.72284E-01	.11737E+00	.13803E-02	.16486E-02	.19456E-02	.579	.549	1.028
3222	.79200E-01	.20832E-01	.81608E-01	.10471E-02	.14127E-02	.14897E-02	.468	.239	.716
3225	.49181E-01	.13981E-01	.54913E-01	.88616E-03	.11199E-02	.11018E-02	.355	.190	.511
3230	.42428E-01	.13708E-01	.49280E-01	.85288E-03	.10453E-02	.10129E-02	.337	.189	.467
3235	.24119E-01	.12797E-01	.32902E-01	.73917E-03	.80765E-03	.75383E-03	.283	.183	.331
3237	.11179E-01	.12349E-01	.18923E-01	.61399E-03	.58157E-03	.54744E-03	.220	.173	.205
3238	.55276E-02	.11384E-01	.10401E-01	.50997E-03	.42441E-03	.42244E-03	.164	.157	.122
3240	.29677E-02	.79747E-02	.42647E-02	.39310E-03	.28137E-03	.30337E-03	.099	.117	.055
3243	.14771E-02	.37827E-02	.95630E-03	.25843E-03	.15794E-03	.18262E-03	.042	.061	.014
3245	.29533E-03	.70077E-03	.35721E-04	.10040E-03	.53426E-04	.63379E-04	.007	.014	.001
3250	.75328E-07	.16060E-06	.90184E-07	.88732E-07	.45272E-07	.41038E-07	.000	.000	.000

***** COMBINED MODAL RESPONSES/ FOR SUPPORT GROUP 3 *****
 MODAL COMBINATION METHOD 2-GROUPING

PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
1	TANGENT	END-I	7472.998	5392.085	3067.788	190747.37	623974.95	417995.43
		END-J	7472.998	5392.085	3067.788	190747.37	576173.09	320360.13
2	TANGENT	END-I	7472.691	5392.467	3067.196	190818.59	576136.21	320384.09
		END-J	7472.691	5392.467	3067.196	190818.59	564948.55	297321.08
3	TANGENT	END-I	7472.660	5392.126	3066.431	190818.59	564948.55	297321.08
		END-J	7472.660	5392.126	3066.431	190818.59	553880.00	274459.04
4	TANGENT	END-I	7464.587	5393.767	3081.543	191812.85	554350.33	272808.34
		END-J	7464.587	5393.767	3081.543	191812.85	541773.80	246997.36
5	TANGENT	END-I	7467.743	5391.410	3075.020	191319.47	541707.88	247524.91
		END-J	7467.743	5391.410	3075.020	191319.47	521111.71	205400.45
6	BEND	END-I	7469.782	5081.933	3540.717	191195.71	519228.54	209970.82
		CENTER	7310.757	5306.839	3540.717	220426.64	482776.31	174130.54
		END-J	7110.877	5571.717	3540.717	253204.94	442255.54	141852.81
7	BEND	END-I	6785.809	5940.355	3537.897	299340.94	410113.05	148411.00
		CENTER	6551.844	6197.551	3537.897	326707.26	368740.87	125796.56
		END-J	6303.529	6449.918	3537.897	351477.70	326254.65	118635.04
8	BEND	END-I	5999.737	6633.768	3683.899	379365.86	282646.03	142287.81
		CENTER	5952.901	6675.855	3683.899	382736.58	275736.66	141336.21
		END-J	5906.100	6717.384	3683.899	385995.94	268919.66	140959.51
9	TANGENT	END-I	5842.145	6661.356	3854.328	390021.24	284284.24	90807.99
		END-J	5842.145	6661.356	3854.328	390021.24	241412.29	173013.24
10	TANGENT	END-I	5838.856	6655.988	3787.351	390008.05	241412.29	173042.81
		END-J	5838.856	6655.988	3787.351	390008.05	194070.09	275731.22
11	TANGENT	END-I	5837.529	6651.529	3681.337	390008.05	194070.09	275731.22
		END-J	5837.529	6651.529	3681.337	390008.05	155692.00	379043.89
12	TANGENT	END-I	5837.227	6652.947	3495.251	390022.93	155692.00	379028.69
		END-J	5837.227	6652.947	3495.251	390022.93	127622.11	556032.90
13	TANGENT	END-I	5835.038	6685.358	3176.887	390036.68	127622.11	556023.28
		END-J	5835.038	6685.358	3176.887	390036.68	154229.00	733842.34
14	TANGENT	END-I	5830.103	6771.998	2785.724	390025.86	154229.00	733848.04
		END-J	5830.103	6771.998	2785.724	390025.86	204313.90	913846.69
15	TANGENT	END-I	5825.284	10128.382	2330.501	390023.10	204313.90	913847.87
		END-J	5825.284	10128.382	2330.501	390023.10	254365.76	720864.45
16	TANGENT	END-I	5820.585	9743.171	1832.237	390035.55	254365.76	720857.78
		END-J	5820.585	9743.171	1832.237	390035.55	295560.51	593207.94
17	TANGENT	END-I	5814.067	9186.109	1339.993	390028.28	295560.51	593212.78
		END-J	5814.067	9186.109	1339.993	390028.28	324746.53	561245.73
18	TANGENT	END-I	5809.861	8676.982	1041.241	390032.78	324746.53	561242.50
		END-J	5809.861	8676.982	1041.241	390032.78	332709.49	575566.02
19	TANGENT	END-I	5805.073	8444.221	962.460	390032.27	332709.49	575566.80

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		END-J	5805.073	8444.221	962.460	390032.27	335974.28	587109.33
20	TANGENT	END-I	5810.984	8292.441	921.796	390015.42	335974.28	587120.11
		END-J	5810.984	8292.441	921.796	390015.42	338570.92	600035.53
21	BEND	END-I	5810.086	8151.788	885.322	390011.81	338570.92	600037.82
		CENTER	5955.766	8045.950	885.322	388516.59	341247.52	606146.26
		END-J	6100.538	7935.689	885.322	386958.19	343989.10	612441.49
22	BEND	END-I	6283.355	7609.622	825.289	384704.97	338845.16	616721.81
		CENTER	6508.192	7418.247	825.289	381877.01	342727.42	626813.43
		END-J	6728.200	7219.285	825.289	378900.18	346752.12	637125.41
23	BEND	END-I	6942.465	5765.343	3804.018	375064.20	526552.34	501780.69
		CENTER	6973.608	5727.714	3804.018	374762.67	528084.17	502624.93
		END-J	7004.463	5689.862	3804.018	374482.21	529604.22	503476.39
24	BEND	END-I	7105.457	6545.212	961.442	372221.30	344299.62	645866.62
		CENTER	7247.183	6387.779	961.442	369687.46	346878.03	652496.18
		END-J	7385.030	6227.911	961.442	367088.72	349517.33	659061.23
25	BEND	END-I	7467.446	5827.054	863.029	364417.98	369576.00	649517.73
		CENTER	7693.581	5525.083	863.029	359816.84	374279.49	659620.08
		END-J	7903.186	5220.900	863.029	355255.83	378860.06	669137.60
26	BEND	END-I	8014.796	4634.908	1011.259	347216.68	409807.69	654964.47
		CENTER	8099.489	4485.309	1011.259	345294.60	411268.12	658271.44
		END-J	8178.993	4338.533	1011.259	343500.48	412601.83	661328.56
27	BEND	END-I	8102.162	4021.167	1024.732	340947.69	381181.36	681220.41
		CENTER	8225.305	3762.846	1024.732	335800.38	384491.80	684733.03
		END-J	8323.621	3539.997	1024.732	330943.40	387544.95	686730.59
28	BEND	END-I	8249.866	3126.344	1410.134	328065.45	396341.89	683087.64
		CENTER	8255.417	3111.796	1410.134	326476.15	397823.92	682338.18
		END-J	8260.059	3099.485	1410.134	324892.53	399300.41	681524.23
29	BEND	END-I	8201.713	3189.687	1186.363	323083.54	417319.41	671501.43
		CENTER	8206.652	3176.875	1186.363	322823.37	416940.87	671007.71
		END-J	8210.717	3166.420	1186.363	322593.59	416540.07	670455.72
30	BEND	END-I	7823.112	3205.416	1222.943	321262.13	395817.63	683529.04
		CENTER	7724.454	3436.198	1222.943	314967.22	395793.50	665168.15
		END-J	7502.628	3896.807	1222.943	311842.61	393990.30	638278.12
31	BEND	END-I	6334.212	4865.412	1259.328	314930.42	396452.58	635229.80
		CENTER	6083.362	5175.746	1259.328	316219.15	394053.35	609741.25
		END-J	5811.754	5479.001	1259.328	318356.15	391222.94	582880.65
32	TANGENT	END-I	5093.021	4594.711	5825.396	322449.18	553193.91	429145.62
		END-J	5093.021	4594.711	5825.396	322449.18	535716.12	415282.78
33	TANGENT	END-I	4856.141	4564.514	5833.819	324695.38	534357.46	415282.78
		END-J	4856.141	4564.514	5833.819	324695.38	489684.27	379529.96
34	TANGENT	END-I	4395.228	4442.636	5841.347	323575.02	490425.49	379529.96
		END-J	4395.228	4442.636	5841.347	323575.02	414917.08	319282.47
35	TANGENT	END-I	3939.206	4223.393	5824.399	323809.03	414734.34	319282.47
		END-J	3939.206	4223.393	5824.399	323809.03	374858.33	286299.24
36	TANGENT	END-I	3759.916	4091.199	5809.467	323508.91	375117.47	286299.24
		END-J	3759.916	4091.199	5809.467	323508.91	369858.61	281797.59
37	TANGENT	END-I	3488.146	3886.292	5787.244	323680.41	369708.51	281797.59
		END-J	3488.146	3886.292	5787.244	323680.41	329345.98	240156.37

38	TANGENT	END-I	3136.894	3380.561	5709.652	323683.00	329343.46	240156.37
		END-J	3136.894	3380.561	5709.652	323683.00	331161.35	215892.55
39	TANGENT	END-I	3126.424	2981.437	5652.231	326309.51	328573.36	215892.55
		END-J	3126.424	2981.437	5652.231	326309.51	329391.74	215316.58
40	TANGENT	END-I	3023.878	2898.823	5623.499	323730.78	331926.76	215316.58
		END-J	3023.878	2898.823	5623.499	323730.78	350715.72	207939.52
41	BEND	END-I	3051.045	5565.747	2472.289	323643.60	207942.14	350800.50
		CENTER	3162.978	5502.970	2472.289	309709.89	221561.56	371868.02
		END-J	3321.755	5408.546	2472.289	293719.25	237980.20	395408.36
42	BEND	END-I	3937.910	4959.139	2107.907	269958.52	263440.12	395201.15
		CENTER	4164.780	4770.263	2107.907	251679.41	274844.77	416182.14
		END-J	4388.726	4564.994	2107.907	232559.26	286048.17	436125.71
43	BEND	END-I	5175.157	3818.724	1914.554	206365.86	306435.72	435457.75
		CENTER	5428.479	3449.029	1914.554	174853.44	310402.71	454946.78
		END-J	5613.099	3139.675	1914.554	146341.37	310835.50	469570.25
44	BEND	END-I	6148.232	2847.992	2267.593	118542.05	321256.59	470396.62
		CENTER	5984.208	3178.108	2267.593	109438.56	293723.24	453546.07
		END-J	5697.106	3668.047	2267.593	116853.66	260803.35	427138.31
45	TANGENT	END-I	5129.531	5167.407	2579.487	140885.52	238954.60	432641.07
		END-J	5129.531	5167.407	2579.487	140885.52	205706.31	378071.25
46	TANGENT	END-I	5139.284	5743.701	2866.095	141042.97	205706.31	378012.60
		END-J	5139.284	5743.701	2866.095	141042.97	159254.52	311131.36
47	TANGENT	END-I	5192.160	6386.119	3137.596	141048.79	159254.52	311128.79
		END-J	5192.160	6386.119	3137.596	141048.79	113649.42	262970.43
48	BEND	END-I	5309.915	7276.035	3066.163	141036.81	112228.83	263591.14
		CENTER	4646.334	7716.646	3066.163	140770.70	92714.00	252562.51
		END-J	4043.840	8048.709	3066.163	135685.25	98165.12	269565.66
49	BEND	END-I	3876.193	8962.141	3218.237	124338.42	112145.65	269584.59
		CENTER	3885.911	8958.109	3218.237	113746.82	139045.31	307506.60
		END-J	4153.149	8837.620	3218.237	100268.32	172372.14	365993.36
50	BEND	END-I	5604.161	8900.601	3400.449	83749.75	184834.04	364058.90
		CENTER	6294.695	8426.275	3400.449	73279.18	218171.85	431091.38
		END-J	7001.921	7848.402	3400.449	73837.30	250486.99	501698.24
51	BEND	END-I	8746.758	7128.413	3576.976	94514.38	238921.29	503866.23
		CENTER	9230.805	6489.341	3576.976	116408.56	255353.35	546763.39
		END-J	9624.095	5890.479	3576.976	143779.02	270142.43	583728.60
52	TANGENT	END-I	10635.314	5351.985	4095.293	180993.16	96031.20	626409.96
		END-J	10635.314	5351.985	4095.293	180993.16	166366.80	663146.37
53	TANGENT	END-I	11273.431	5556.834	4489.266	180690.96	165615.79	663416.21
		END-J	11273.431	5556.834	4489.266	180690.96	248601.08	706991.54
54	TANGENT	END-I	11931.824	5767.217	4921.057	181016.35	248418.92	706972.43
		END-J	11931.824	5767.217	4921.057	181016.35	343481.48	759805.79
55	TANGENT	END-I	12597.903	5958.905	5380.101	180949.89	343754.57	759698.12
		END-J	12597.903	5958.905	5380.101	180949.89	444502.21	819975.90
56	TANGENT	END-I	13261.413	6108.393	5863.735	180915.98	444515.94	819975.90
		END-J	13261.413	6108.393	5863.735	180915.98	553682.09	889232.15

57	BEND	END-I	12460.378	11160.582	6203.266	181432.39	577278.48	873990.94
		CENTER	11179.858	12443.133	6203.266	243139.85	613344.29	833247.61
		END-J	9778.437	13572.138	6203.266	311821.75	643686.68	804073.58
58	BEND	END-I	7051.852	15696.978	6824.653	461820.15	546106.42	804107.99
		CENTER	5675.380	16245.383	6824.653	521685.79	556248.74	783643.60
		END-J	4576.650	16588.436	6824.653	581688.68	563163.05	795158.00
59	BEND	END-I	4301.233	17003.339	7445.543	696510.76	413035.50	795025.44
		CENTER	5469.070	16664.563	7445.543	744030.86	415399.95	838443.13
		END-J	7076.614	16047.769	7445.543	788816.76	420176.97	917207.73
60	BEND	END-I	10432.388	14460.123	7859.762	852681.23	244098.38	923797.22
		CENTER	12765.876	12448.424	7859.762	866826.24	285465.84	1039505.59
		END-J	14714.797	10070.030	7859.762	874857.21	334450.08	1152213.40
61	BEND	END-I	17044.639	5074.859	8284.805	827183.57	439203.20	1152256.71
		CENTER	17368.085	3824.392	8284.805	788004.67	474987.77	1151669.26
		END-J	17318.131	4044.411	8284.805	751316.22	501912.50	1124113.38
62	BEND	END-I	15957.822	7652.497	8552.254	654432.37	623707.02	1123712.86
		CENTER	15704.235	8160.233	8552.254	641305.39	621573.10	1098638.03
		END-J	15430.698	8666.232	8552.254	628880.89	618691.23	1072116.30
63	TANGENT	END-I	14772.275	8752.461	9643.605	602049.74	694120.85	1040880.82
		END-J	14772.275	8752.461	9643.605	602049.74	575066.23	861287.40
64	TANGENT	END-I	14813.914	8747.063	9725.260	602080.65	574414.15	861700.72
		END-J	14813.914	8747.063	9725.260	602080.65	522345.88	689729.27
65	BEND	END-I	14863.940	8851.403	9665.064	601991.76	687298.28	525642.34
		CENTER	14936.200	8729.059	9665.064	597636.46	625763.86	531785.04
		END-J	14928.743	8741.839	9665.064	596672.64	561649.52	544900.37
66	BEND	END-I	14659.615	9272.339	9660.947	595631.29	563087.12	544554.93
		CENTER	14405.404	9662.564	9660.947	594697.14	496244.91	559969.20
		END-J	14081.583	10128.697	9660.947	593073.85	433086.98	583480.45
67	BEND	END-I	13134.164	11366.836	9674.401	582121.01	447912.38	583318.06
		CENTER	12630.584	11923.928	9674.401	573422.38	403119.32	612750.46
		END-J	12094.382	12467.336	9674.401	561336.87	375950.60	653746.92
68	BEND	END-I	10851.444	13600.623	9651.762	523329.13	426439.95	654292.39
		CENTER	10318.466	14009.148	9651.762	501776.14	431570.32	704082.77
		END-J	9830.267	14355.936	9651.762	476201.04	455680.33	765905.48
69	TANGENT	END-I	9018.439	16059.982	7532.787	410377.39	449072.01	806813.40
		END-J	9018.439	16059.982	7532.787	410377.39	452717.41	887316.70

***** COMBINED MODAL RESPONSES FOR SUPPORT GROUP 3 *****
 MODAL COMBINATION METHOD 2-GROUPING

SUPPORT FORCES AND MOMENTS

NODE NUMBER	COMPONENT DIRECTION	FORCE/MOMENT (LOCAL)
7090	FX	5210.
7090	FY	6672.
7090	FZ	4757.
7090	MX	501583.
7090	MY	481457.
7090	MZ	341958.
3047	FZ	52.
3116	FZ	257.
3210	FX	10285.
3210	FZ	114.
3250	FX	7533.
3250	FY	16060.
3250	FZ	9018.
3250	MX	887317.
3250	MY	452717.
3250	MZ	410377.
3035	FY	16190.
3083	FZ	5096.

***** SRSS COMBINATION OF SUPPORT GROUP RESPONSES *****
 MODAL COMBINATION METHOD 2-GROUPING

NODE NUMBER	DISPLACEMENTS / ROTATIONS			ACCELERATIONS IN G'S					
	X- TRANSLATION	Y- TRANSLATION	Z- TRANSLATION	X- ROTATION	Y- ROTATION	Z- ROTATION	X- DIRECTION	Y- DIRECTION	Z- DIRECTION
7090	.73517E-07	.14639E-06	.61171E-07	.80636E-07	.69030E-07	.81237E-07	.000	.000	.000
3001	.15252E-03	.72444E-03	.16113E-03	.11460E-04	.94834E-05	.99515E-05	.004	.005	.005
3005	.22034E-03	.31991E-03	.24508E-03	.20259E-04	.16799E-04	.16610E-04	.006	.007	.007
3010	.33599E-03	.48082E-03	.39461E-03	.37007E-04	.30737E-04	.28483E-04	.006	.011	.010
3011	.60193E-03	.84856E-03	.75449E-03	.83511E-04	.69392E-04	.58833E-04	.015	.019	.018
3012	.13357E-02	.18069E-02	.18722E-02	.15759E-03	.13100E-03	.10097E-03	.015	.041	.040
3019	.36917E-02	.50833E-02	.62503E-02	.30701E-03	.21807E-03	.15566E-03	.015	.119	.122
3021	.54695E-02	.85564E-02	.11371E-01	.43446E-03	.32988E-03	.16655E-03	.015	.214	.223
3023	.56834E-02	.91266E-02	.12292E-01	.45698E-03	.34289E-03	.16589E-03	.015	.231	.243
3024	.66488E-02	.11476E-01	.16930E-01	.55996E-03	.37681E-03	.16084E-03	.015	.311	.337
3026	.80289E-02	.13437E-01	.23474E-01	.68278E-03	.44818E-03	.18488E-03	.179	.400	.457
3028	.95848E-02	.13887E-01	.20719E-01	.80328E-03	.48474E-03	.28427E-03	.205	.472	.575
3030	.12498E-01	.11279E-01	.44013E-01	.10054E-02	.51681E-03	.60987E-03	.243	.543	.759
3032	.15508E-01	.18761E-01	.57559E-01	.12054E-02	.51819E-03	.10892E-02	.272	.557	.906
3035	.18397E-01	.49095E-01	.70550E-01	.14069E-02	.50135E-03	.17083E-02	.290	.574	1.014
3037	.21030E-01	.10077E-01	.82431E-01	.16141E-02	.48290E-03	.23478E-02	.299	.697	1.083
3038	.23343E-01	.16733E+00	.92927E-01	.18258E-02	.48165E-03	.28931E-02	.303	.900	1.118
3040	.25333E-01	.24755E+00	.10212E+00	.20398E-02	.51175E-03	.33526E-02	.302	1.129	1.119
3044	.26050E-01	.28234E+00	.10547E+00	.21250E-02	.53322E-03	.35131E-02	.298	1.219	1.111
3047	.26381E-01	.29990E+00	.10707E+00	.21667E-02	.54551E-03	.35873E-02	.296	1.262	1.104
3050	.26688E-01	.31638E+00	.10852E+00	.22053E-02	.55785E-03	.36535E-02	.293	1.300	1.097
3053	.26986E-01	.31000E+00	.10958E+00	.22290E-02	.56947E-03	.37096E-02	.291	1.333	1.089
3056	.27823E-01	.35527E+00	.10989E+00	.22940E-02	.59086E-03	.37988E-02	.288	1.385	1.067
3059	.28089E-01	.35967E+00	.10970E+00	.23640E-02	.59508E-03	.38145E-02	.287	1.393	1.061
3062	.29831E-01	.37748E+00	.10825E+00	.23442E-02	.61316E-03	.38773E-02	.286	1.429	1.033
3065	.37383E-01	.41062E+00	.10283E+00	.24191E-02	.65090E-03	.39903E-02	.287	1.490	.966
3068	.44679E-01	.42718E+00	.98167E-01	.24576E-02	.67280E-03	.40472E-02	.291	1.518	.921
3071	.67201E-01	.46069E+00	.84978E-01	.25389E-02	.72337E-03	.41633E-02	.311	1.570	.811
3074	.72724E-01	.46631E+00	.81771E-01	.25538E-02	.73356E-03	.41842E-02	.317	1.578	.788
3077	.78531E-01	.47184E+00	.78421E-01	.25687E-02	.74394E-03	.42052E-02	.324	1.586	.765
3080	.16563E+00	.52683E+00	.28747E-01	.27444E-02	.87873E-03	.44403E-02	.464	1.657	.512
3083	.22410E+00	.53679E+00	.33419E-01	.28336E-02	.95490E-03	.45530E-02	.572	1.670	.463
3086	.24082E+00	.53680E+00	.21917E-01	.28576E-02	.97583E-03	.45830E-02	.604	1.677	.468
3089	.28579E+00	.53682E+00	.48970E-01	.29169E-02	.10324E-02	.46605E-02	.687	1.673	.514
3092	.37247E+00	.53683E+00	.10332E+00	.30116E-02	.11421E-02	.47996E-02	.839	1.678	.686
3095	.43000E+00	.53685E+00	.13959E+00	.30615E-02	.12149E-02	.48846E-02	.933	1.682	.823
3098	.43883E+00	.53685E+00	.14515E+00	.30683E-02	.12260E-02	.48972E-02	.947	1.682	.844
3100	.54052E+00	.53686E+00	.20905E+00	.31324E-02	.13541E-02	.50349E-02	1.098	1.687	1.093
3104	.64490E+00	.53687E+00	.27398E+00	.31739E-02	.14841E-02	.51650E-02	1.242	1.692	1.341
3107	.70534E+00	.53687E+00	.27638E+00	.31750E-02	.14889E-02	.51697E-02	1.247	1.693	1.350
3110	.79083E+00	.52937E+00	.31115E+00	.31885E-02	.15586E-02	.52369E-02	1.324	1.695	1.480
3113	.86648E+00	.49978E+00	.36366E+00	.32003E-02	.16619E-02	.53377E-02	1.441	1.696	1.653
3115	.96657E+00	.41571E+00	.41134E+00	.32043E-02	.17521E-02	.54354E-02	1.548	1.683	1.744
3116	.10262E+01	.27405E+00	.47778E+00	.32031E-02	.18784E-02	.56048E-02	1.695	1.635	1.747
3119	.10258E+01	.20534E+00	.52840E+00	.31970E-02	.19969E-02	.58280E-02	1.784	1.544	1.545
3120	.10253E+01	.14170E+00	.53890E+00	.31941E-02	.20437E-02	.59392E-02	1.785	1.498	1.408
3122	.10247E+01	.14707E+00	.55408E+00	.31920E-02	.20923E-02	.60784E-02	1.787	1.449	1.291
3123	.10034E+01	.25125E+00	.57139E+00	.31917E-02	.21292E-02	.62145E-02	1.788	1.418	1.266
3125	.92304E+00	.36167E+00	.58781E+00	.31935E-02	.21623E-02	.63885E-02	1.762	1.417	1.365
3128	.78518E+00	.44493E+00	.57556E+00	.31923E-02	.21837E-02	.65263E-02	1.657	1.457	1.518
3198	.63942E+00	.46241E+00	.53560E+00	.31762E-02	.22014E-02	.66218E-02	1.473	1.509	1.657
3199	.50712E+00	.44221E+00	.48078E+00	.31371E-02	.22142E-02	.66414E-02	1.263	1.523	1.671
3200	.37614E+00	.42214E+00	.42444E+00	.31744E-02	.22240E-02	.65971E-02	1.052	1.504	1.610
3205	.24383E+00	.40161E+00	.37151E+00	.29866E-02	.22328E-02	.64896E-02	.819	1.481	1.572
3208	.11941E+00	.38230E+00	.32199E+00	.28676E-02	.22395E-02	.63100E-02	.558	1.453	1.564
3210	.24518E-02	.36375E+00	.28086E+00	.27236E-02	.22424E-02	.60676E-02	.292	1.420	1.593
3212	.11918E+00	.32990E+00	.24886E+00	.25513E-02	.22410E-02	.57586E-02	.142	1.380	1.659
			.22159E+00	.23273E-02	.22374E-02	.53463E-02	.449	1.288	1.731

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3215	.19572E+00	.25386E+00	.19192E+00	.20682E-02	.22268E-02	.48831E-02	.694	1.049	1.683
3220	.22634E+00	.14858E+00	.15747E+00	.17422E-02	.21533E-02	.42660E-02	.792	.697	1.533
3222	.18473E+00	.32362E-01	.10954E+00	.13538E-02	.18632E-02	.32805E-02	.658	.350	1.237
3225	.11777E+00	.21984E-01	.73897E-01	.11702E-02	.15016E-02	.25050E-02	.511	.311	.945
3230	.10222E+00	.21445E-01	.66420E-01	.11311E-02	.14096E-02	.23267E-02	.484	.308	.866
3235	.59003E-01	.17896E-01	.44554E-01	.99269E-03	.11172E-02	.17858E-02	.402	.293	.607
3237	.26809E-01	.16415E-01	.25667E-01	.83292E-03	.83979E-03	.13223E-02	.310	.274	.366
3238	.10703E-01	.15062E-01	.14078E-01	.69527E-03	.64377E-03	.10246E-02	.231	.247	.210
3240	.37712E-02	.10536E-01	.57404E-02	.53601E-03	.44833E-03	.73656E-03	.141	.177	.091
3243	.22901E-02	.49576E-02	.12783E-02	.35023E-03	.26282E-03	.44462E-03	.060	.089	.022
3245	.57901E-03	.88619E-03	.46042E-04	.13450E-03	.91969E-04	.15510E-03	.011	.019	.001
3250	.11699E-06	.18726E-06	.11624E-06	.11801E-06	.80170E-07	.10043E-06	.000	.000	.000

***** SRSS COMBINATION OF SUPPORT GROUP RESPONSES *****
 MODAL COMBINATION METHOD 2-GROUPING

PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	STATION	X-AXIS FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
1	TANGENT	END-I	10075.005	13213.859	5493.029	275577.80	852620.30	992337.63
		END-J	10075.005	13213.859	5493.028	275577.80	768157.07	746941.96
2	TANGENT	END-I	10072.345	13215.603	5492.325	275593.20	768126.34	746967.92
		END-J	10072.345	13215.603	5492.325	275593.20	748569.60	688378.22
3	TANGENT	END-I	10072.345	13214.996	5490.544	275593.20	748569.60	688378.22
		END-J	10072.345	13214.996	5490.544	275593.20	729328.42	629935.27
4	TANGENT	END-I	10059.753	13224.220	5488.085	278125.24	729919.15	628133.88
		END-J	10059.753	13224.220	5488.085	278125.24	708347.93	561703.34
5	TANGENT	END-I	10069.584	13215.353	5484.783	277254.00	708231.41	562281.01
		END-J	10069.584	13215.353	5484.783	277254.00	673250.60	451945.95
6	BEND	END-I	10066.890	12546.114	6815.417	276619.53	692891.44	420471.32
		CENTER	9407.982	13046.379	6815.417	311924.78	630256.81	314677.18
		END-J	8797.571	13465.508	6815.417	350672.97	564645.37	217667.25
7	BEND	END-I	8108.325	13791.305	6938.873	404510.64	524452.13	224680.18
		CENTER	7810.074	13962.347	6938.873	436314.63	463264.55	169686.85
		END-J	7636.699	14057.850	6938.873	463925.33	405433.03	176941.53
8	BEND	END-I	7622.815	13543.980	7849.152	494411.91	354142.84	202614.22
		CENTER	7634.730	13537.589	7849.152	497943.63	346331.36	207292.74
		END-J	7650.539	13528.987	7849.152	501299.36	339047.96	213505.51
9	TANGENT	END-I	7668.754	14611.313	5508.772	505321.60	359599.37	164840.76
		END-J	7668.754	14611.313	5508.772	505321.60	299876.24	348826.71
10	TANGENT	END-I	7657.064	14595.729	5372.812	505201.66	299876.24	349000.43
		END-J	7657.064	14595.729	5372.812	505201.66	236350.77	575763.78
11	TANGENT	END-I	7645.276	14578.137	5167.768	505201.66	236350.77	575763.78
		END-J	7645.276	14578.137	5167.768	505201.66	189862.99	802906.92
12	TANGENT	END-I	7630.164	14561.492	4818.190	505423.04	189862.99	802767.74
		END-J	7630.164	14561.492	4818.190	505423.04	174561.76	1190761.87
13	TANGENT	END-I	7610.081	14574.015	4238.069	505671.28	174561.76	1190656.60
		END-J	7610.081	14574.015	4238.069	505671.28	226599.10	1578614.04
14	TANGENT	END-I	7588.597	14649.298	3563.208	505447.76	226599.10	1578685.62
		END-J	7588.597	14649.298	3563.208	505447.76	294089.90	1968301.66
15	TANGENT	END-I	7567.342	13754.809	2857.023	505383.98	294089.90	1968317.97
		END-J	7567.342	13754.809	2857.023	505383.98	352421.86	1693275.93
16	TANGENT	END-I	7546.408	13296.073	2228.112	505676.26	352421.86	1693188.81
		END-J	7546.408	13296.073	2228.112	505676.26	393818.19	1462492.49
17	TANGENT	END-I	7524.508	12628.842	1875.906	505478.32	393818.19	1462560.93
		END-J	7524.508	12628.842	1875.906	505478.32	416747.61	1291474.21
18	TANGENT	END-I	7509.743	12011.253	1893.635	505723.41	416747.61	1291378.21
		END-J	7509.743	12011.253	1893.635	505723.41	421085.32	1243098.26
19	TANGENT	END-I	7500.095	11727.334	1986.327	503783.84	421085.32	1243885.99

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		END-J	7500.095	11727.334	1986.327	503783.84	422400.45	1224482.42
20	TANGENT	END-I	7502.467	11541.511	2044.233	505574.16	422400.45	1223743.83
		END-J	7502.467	11541.511	2044.233	505574.16	423220.96	1208307.01
21	BEND	END-I	7499.261	11368.932	2111.822	505843.16	423220.96	1208194.28
		CENTER	7603.429	11299.498	2111.822	504942.72	424455.81	1202069.76
		END-J	7710.881	11226.378	2111.822	503963.97	425820.78	1196124.46
22	BEND	END-I	7846.378	10917.937	2150.131	502639.24	429816.58	1195260.73
		CENTER	8027.904	10785.135	2150.131	501110.25	430857.99	1185535.23
		END-J	8214.423	10643.812	2150.131	499384.68	432248.92	1176203.13
23	BEND	END-I	8399.705	8607.654	6108.954	499018.25	739920.69	1011505.12
		CENTER	8426.876	8581.113	6108.954	497541.45	740523.69	1009580.02
		END-J	8453.949	8554.406	6108.954	496340.92	741110.92	1007661.67
24	BEND	END-I	8543.073	10042.737	2353.317	496037.65	442009.06	1170304.63
		CENTER	8677.682	9926.545	2353.317	494775.55	442093.87	1163040.50
		END-J	8812.293	9807.199	2353.317	493414.31	442384.69	1155904.47
25	BEND	END-I	8879.976	9397.592	2488.130	489831.38	443244.30	1157083.25
		CENTER	9113.316	9171.549	2488.130	485739.74	445991.42	1142422.97
		END-J	9341.310	8939.473	2488.130	481455.23	449143.77	1127973.81
26	BEND	END-I	9470.891	8346.805	2821.779	478619.85	482505.16	1115326.47
		CENTER	9572.049	8230.721	2821.779	475580.89	484037.25	1106925.48
		END-J	9670.257	8115.206	2821.779	472591.63	485545.42	1098513.39
27	BEND	END-I	9584.189	7819.301	2823.187	469605.72	455976.12	1112415.05
		CENTER	9757.805	7601.467	2823.187	464485.64	458271.09	1092974.65
		END-J	9914.754	7395.442	2823.187	459228.84	461171.81	1073161.26
28	BEND	END-I	9888.694	6718.802	3581.012	450735.11	531973.09	1043631.58
		CENTER	9907.792	6690.447	3581.012	449997.98	532015.50	1039360.25
		END-J	9926.342	6663.034	3581.012	449265.06	532093.41	1035062.07
29	BEND	END-I	9858.266	6883.083	3085.333	449599.69	500092.74	1050678.67
		CENTER	9875.684	6858.001	3085.333	448470.52	500127.24	1046561.34
		END-J	9892.353	6833.799	3085.333	447358.95	500158.01	1042425.30
30	BEND	END-I	9432.792	6647.516	3281.792	445475.08	472867.10	1055919.03
		CENTER	9500.426	6549.605	3281.792	433572.51	478203.39	999293.36
		END-J	9472.247	6590.105	3281.792	422735.73	486163.56	939380.22
31	BEND	END-I	8368.181	6828.253	3556.775	412374.26	496589.91	938531.89
		CENTER	8235.472	6988.483	3556.775	409372.15	500756.69	901822.21
		END-J	8087.327	7160.027	3556.775	407350.05	505325.59	865177.31
32	TANGENT	END-I	7466.313	5736.154	7205.917	406458.68	843822.38	540865.37
		END-J	7466.313	5736.154	7205.917	406458.68	823047.39	523610.48
33	TANGENT	END-I	7141.606	5695.675	7178.221	406449.12	823050.18	523610.48
		END-J	7141.606	5695.675	7178.221	406449.12	770353.78	479186.87
34	TANGENT	END-I	6512.112	5524.155	7103.643	405567.94	770292.29	479186.87
		END-J	6512.112	5524.155	7103.643	406567.94	682416.22	404670.12
35	TANGENT	END-I	5869.842	5241.135	6985.680	406439.52	682492.23	404670.12
		END-J	5869.842	5241.135	6985.680	406439.52	636254.24	363968.26
36	TANGENT	END-I	5607.636	5071.938	6923.806	406815.16	636014.91	363968.26
		END-J	5607.636	5071.938	6923.806	406815.16	629866.18	358413.85
37	TANGENT	END-I	5196.475	4813.482	6832.753	406567.04	630025.51	358413.85
		END-J	5196.475	4813.482	6832.753	406567.84	579227.14	306897.59

38	TANGENT	END-I	4588.514	4182.466	6636.466	406657.81	579164.06	306897.59
		END-J	4588.514	4182.466	6636.466	406657.81	568706.22	276247.05
39	TANGENT	END-I	4453.293	3687.989	6530.634	413954.51	563416.83	276247.05
		END-J	4453.293	3687.989	6530.634	413954.51	563808.92	275503.55
40	TANGENT	END-I	4274.990	3587.293	6484.440	406950.56	568885.57	275503.55
		END-J	4274.990	3587.293	6484.440	406950.56	581453.26	265771.97
41	BEND	END-I	4152.992	6408.336	3078.238	406770.18	266450.65	581277.23
		CENTER	4241.102	6350.542	3078.238	391479.85	280268.54	599528.00
		END-J	4369.744	6262.608	3078.238	373862.76	297821.38	620842.71
42	BEND	END-I	4813.010	5872.020	2624.437	347676.36	326740.51	621514.07
		CENTER	5021.974	5694.520	2624.437	327570.60	339276.86	643385.55
		END-J	5232.433	5501.595	2624.437	306585.45	351912.42	665679.05
43	BEND	END-I	6047.521	4918.387	2369.895	278003.24	376108.19	664999.63
		CENTER	6324.025	4557.272	2369.895	243692.74	380806.57	693889.96
		END-J	6534.942	4249.326	2369.895	212710.87	381980.41	718331.03
44	BEND	END-I	7502.736	4047.698	2758.813	181720.26	396060.45	719214.41
		CENTER	7407.345	4219.591	2758.813	168064.52	366045.44	717703.09
		END-J	7174.899	4603.652	2758.813	169435.02	331009.37	705767.92
45	TANGENT	END-I	7253.528	6110.429	3145.533	187812.54	304579.29	712991.15
		END-J	7253.528	6110.429	3145.533	187812.54	267179.75	669567.74
46	TANGENT	END-I	7785.710	6733.715	3467.630	187940.66	267179.75	669531.78
		END-J	7785.710	6733.715	3467.630	187940.66	216961.75	619850.93
47	TANGENT	END-I	8476.668	7423.782	3767.286	187945.51	216961.75	619849.56
		END-J	8476.668	7423.782	3767.286	187945.51	171296.65	587066.63
48	BEND	END-I	9385.914	8373.352	3718.466	187935.72	158203.34	590738.77
		CENTER	8857.830	8930.043	3718.466	184045.51	143815.93	578291.04
		END-J	8299.132	9451.573	3718.466	174915.94	153671.76	572635.86
49	BEND	END-I	8819.638	10808.420	3889.891	158245.70	170901.66	572602.24
		CENTER	8400.982	11137.193	3889.891	144197.62	198359.35	561130.90
		END-J	8066.588	11382.037	3889.891	127902.44	233189.95	566352.80
50	BEND	END-I	9179.814	12238.824	4129.943	109240.68	246420.44	564653.68
		CENTER	9089.633	12305.833	4129.943	100751.13	279978.38	571558.10
		END-J	9142.092	12266.880	4129.943	105730.93	313479.21	602860.17
51	BEND	END-I	10542.065	12790.039	4408.287	132965.86	298386.54	605124.73
		CENTER	10727.611	12634.684	4408.287	159375.57	314138.24	627622.19
		END-J	10970.945	12424.189	4408.287	191564.32	328783.01	665148.11
52	TANGENT	END-I	12057.821	12250.577	6266.405	235057.37	165557.44	710295.30
		END-J	12057.821	12250.577	6266.405	235057.37	245372.43	791799.78
53	TANGENT	END-I	12772.941	12820.483	6837.916	234800.33	245037.46	791978.34
		END-J	12772.941	12820.483	6837.916	234800.33	359549.31	931340.21
54	TANGENT	END-I	13525.312	13297.966	7386.631	235279.98	359227.34	931343.50
		END-J	13525.312	13297.966	7386.631	235279.98	497182.98	1119840.32
55	TANGENT	END-I	14299.172	13653.601	7914.905	235047.00	496905.12	1120012.53
		END-J	14299.172	13653.601	7914.905	235047.00	644375.83	1333328.45
56	TANGENT	END-I	15080.135	13870.031	8447.852	234995.27	644394.61	1333328.45
		END-J	15080.135	13870.031	8447.852	234995.27	803208.95	1566267.39

57	BEND	END-I	14285.920	15881.628	7742.821	235461.85	726873.32	1603050.89
		CENTER	12748.796	17139.990	7742.821	312853.08	772023.48	1662710.74
		END-J	11177.599	18203.715	7742.821	399187.44	809564.50	1735829.46
58	BEND	END-I	8603.631	20085.124	8468.554	587535.08	685279.24	1735812.18
		CENTER	7652.942	20466.348	8468.554	662627.41	696400.69	1807273.32
		END-J	7268.810	20605.885	8468.554	737935.15	702924.76	1893983.68
59	BEND	END-I	8271.662	20545.572	9221.162	881255.64	511583.14	1894069.02
		CENTER	9747.784	19888.042	9221.162	940348.02	509428.65	1987835.97
		END-J	11499.395	18928.578	9221.162	995852.93	509853.55	2090819.87
60	BEND	END-I	14859.994	16636.676	9951.846	1073502.13	329566.74	2088583.38
		CENTER	17204.012	14199.383	9951.846	1096179.83	366629.30	2182566.53
		END-J	19088.163	11543.010	9951.846	1111018.65	417182.26	2253917.00
61	BEND	END-I	20920.916	7300.809	10596.311	1058204.01	536120.60	2254179.27
		CENTER	21001.694	7065.207	10596.311	1010919.00	581446.13	2200909.62
		END-J	20662.201	8003.736	10596.311	965698.70	618020.43	2118027.83
62	BEND	END-I	18561.347	11911.574	10920.970	839769.06	770892.18	2121573.77
		CENTER	18219.652	12427.822	10920.970	823578.75	769305.55	2082711.19
		END-J	17858.029	12941.990	10920.970	808185.71	766907.40	2042517.96
63	TANGENT	END-I	17009.785	13295.788	11926.821	772785.38	908174.90	1997794.11
		END-J	17009.785	13295.788	11926.821	772785.38	782777.64	1721922.98
64	TANGENT	END-I	17058.420	13259.034	12103.205	772498.78	779826.99	1723389.86
		END-J	17058.420	13259.034	12103.205	772498.78	736756.69	1455575.25
65	BEND	END-I	17117.679	11478.289	13869.199	772766.13	1484158.06	677031.33
		CENTER	17133.966	11455.042	13869.199	814205.33	1363160.78	692378.97
		END-J	17073.419	11546.074	13869.199	864718.56	1232957.50	717327.33
66	BEND	END-I	15705.516	12180.183	13871.345	987618.55	1137090.31	717014.87
		CENTER	16415.862	12568.363	13871.345	1041153.66	985560.55	746907.25
		END-J	16065.155	13013.890	13871.345	1087433.79	832635.51	786614.70
67	BEND	END-I	15096.747	14174.242	13887.253	1167157.48	716793.91	786451.92
		CENTER	14606.997	14678.023	13887.253	1189323.49	586080.60	831853.27
		END-J	14101.246	15163.822	13887.253	1198291.90	492882.17	888611.87
68	BEND	END-I	12992.544	16170.725	13863.825	1182734.77	527995.08	889284.52
		CENTER	12549.906	16515.728	13863.825	1159784.97	570986.83	951280.05
		END-J	12168.618	16798.678	13863.825	1122519.19	666842.38	1024025.52
69	TANGENT	END-I	11524.060	18725.817	11699.168	1004269.40	748914.30	1088083.96
		END-J	11624.060	18725.817	11699.168	1004269.40	801697.53	1180061.64

***** SRSS COMBINATION OF SUPPORT GROUP RESPONSES *****
 MODAL COMBINATION METHOD 2-GROUPING

SUPPORT FORCES AND MOMENTS

NODE NUMBER	COMPONENT DIRECTION	FORCE/MOMENT (LOCAL)
7090	FX	7352.
7090	FY	14639.
7090	FZ	6117.
7090	MX	806361.
7090	MY	650299.
7090	MZ	812375.
3047	FZ	64.
3116	FZ	317.
3210	FX	12259.
3210	FZ	149.
3250	FX	11699.
3250	FY	18726.
3250	FZ	11624.
3250	MX	1180062.
3250	MY	801698.
3250	MZ	1004269.
3035	FY	27076.
3083	FZ	7401.

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BENCHMARK PROBLEM 2
HIGH FREQUENCY GROUP RESPONSE
(RIGID RESPONSE)

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STATIC ANALYSIS

STRUCTURE LOAD CASE	GROUP	MEMBER	LOAD	MULTIPLIERS
		A	B	C D
1	GROUP 1	X	.000	.000 .000
2	GROUP 1	Y	.000	.000 .000
3	GROUP 1	Z	.000	.000 .000
4	GROUP 2	X	.000	.000 .000
5	GROUP 2	Y	.000	.000 .000
6	GROUP 2	Z	.000	.000 .000
7	GROUP 3	X	.000	.000 .000
8	GROUP 3	Y	.000	.000 .000
9	GROUP 3	Z	.000	.000 .000

STATIC ANALYSIS

LOAD CASE 1 GROUP 1 X EXCITATION

DISPLACEMENTS/ROTATIONS OF UNRESTRAINED NODES

NODE NUMBER	X-TRANSLATION	Y-TRANSLATION	Z-TRANSLATION	X-ROTATION	Y-ROTATION	Z-ROTATION
7090	-1.59919E-09	6.49467E-10	2.39982E-10	-2.63538E-10	-4.98409E-10	-1.25201E-10
3001	-1.20642E-06	3.02686E-08	1.38633E-06	-3.09217E-08	-6.21791E-08	-1.07180E-08
3005	-1.63255E-06	6.64296E-08	1.96406E-06	-5.09857E-08	-1.02439E-07	-1.29729E-08
3010	-2.31427E-06	1.48060E-07	2.92175E-06	-8.61300E-08	-1.72856E-07	-1.23818E-08
3011	-3.79238E-06	3.85658E-07	5.06490E-06	-1.74019E-07	-3.48357E-07	4.51048E-09
3012	-6.79928E-06	1.37743E-06	1.04166E-05	-2.90445E-07	-5.79943E-07	6.93064E-08
3019	-1.31329E-05	7.01896E-06	2.69720E-05	-4.24126E-07	-8.10955E-07	3.34179E-07
3021	-1.69651E-05	1.71585E-05	4.20239E-05	-4.41643E-07	-7.47188E-07	5.73306E-07
3023	-1.76436E-05	1.93929E-05	4.42647E-05	-4.36983E-07	-7.16072E-07	6.04761E-07
3024	-2.04878E-05	3.03715E-05	5.29236E-05	-3.97664E-07	-5.22415E-07	6.77726E-07
3026	-2.29332E-05	4.33949E-05	5.91206E-05	-3.15606E-07	-2.00176E-07	6.17995E-07
3028	-2.40162E-05	5.36793E-05	5.94323E-05	-2.02950E-07	1.74649E-07	4.24931E-07
3030	-2.25419E-05	6.00467E-05	4.56650E-05	2.92355E-08	7.82253E-07	-7.81804E-08
3032	-1.76220E-05	4.93641E-05	1.72311E-05	2.65944E-07	1.17505E-06	-6.02006E-07
3035	-1.12107E-05	2.47000E-05	-1.74892E-05	4.52419E-07	1.20451E-06	-9.07849E-07
3037	-5.81556E-06	-4.55009E-06	-4.75508E-05	5.64015E-07	8.41770E-07	-8.88648E-07
3038	-3.70774E-06	-2.95499E-05	-6.30102E-05	6.01142E-07	1.88771E-07	-5.46799E-07
3040	-6.17367E-06	-4.12540E-05	-5.83326E-05	5.76442E-07	-5.54477E-07	6.25073E-08
3044	-8.43112E-06	-4.07220E-05	-5.08468E-05	5.55337E-07	-8.28102E-07	3.52947E-07
3047	-9.74142E-06	-3.92596E-05	-4.61389E-05	5.43796E-07	-9.49643E-07	4.98826E-07
3050	-1.11037E-05	-3.72289E-05	-4.12373E-05	5.33184E-07	-1.05293E-06	6.34325E-07
3053	-1.24563E-05	-3.48923E-05	-3.65084E-05	5.23390E-07	-1.13517E-06	7.52193E-07
3056	-1.54276E-05	-2.98916E-05	-2.77641E-05	5.03959E-07	-1.25228E-06	9.38849E-07
3059	-1.61143E-05	-2.88441E-05	-2.60626E-05	4.99950E-07	-1.27114E-06	9.71290E-07
3062	-1.93712E-05	-2.42009E-05	-1.88774E-05	4.82207E-07	-1.33969E-06	1.09562E-06
3065	-2.73850E-05	-1.40609E-05	-4.57932E-06	4.42099E-07	-1.43303E-06	1.28905E-06
3068	-3.29052E-05	-8.42592E-06	2.98634E-06	4.17481E-07	-1.46339E-06	1.36354E-06
3071	-4.67842E-05	3.69775E-06	1.86327E-05	3.54667E-07	-1.48612E-06	1.44427E-06
3074	-4.97558E-05	5.77483E-06	2.13154E-05	3.41418E-07	-1.48412E-06	1.44644E-06
3077	-5.28216E-05	7.81255E-06	2.39508E-05	3.27471E-07	-1.48031E-06	1.44410E-06
3080	-8.98214E-05	2.62484E-05	4.84648E-05	1.17048E-07	-1.31658E-06	1.06468E-06
3083	-1.04084E-04	2.85128E-05	5.20597E-05	-1.89465E-08	-1.14951E-06	6.14339E-07
3086	-1.06633E-04	2.85237E-05	5.21171E-05	-6.03483E-08	-1.09820E-06	4.67853E-07
3089	-1.10228E-04	2.85759E-05	5.13330E-05	-1.87668E-07	-9.59675E-07	5.11540E-08
3092	-1.04335E-04	2.88200E-05	4.56404E-05	-4.63480E-07	-6.99369E-07	-7.68276E-07
3095	-9.16055E-05	2.90664E-05	3.88397E-05	-6.45522E-07	-5.31567E-07	-1.27230E-06
3098	-8.91025E-05	2.91153E-05	3.75988E-05	-6.72043E-07	-5.06394E-07	-1.34368E-06
3100	-5.18410E-05	2.97346E-05	2.01743E-05	-9.16016E-07	-2.28417E-07	-1.96654E-06
3101	-4.44588E-06	3.04659E-05	-1.40409E-06	-1.02551E-06	3.04674E-08	-2.16167E-06
3104	-2.64645E-06	3.05211E-05	-2.22965E-06	-1.02648E-06	3.95813E-08	-2.15917E-06
3107	2.29191E-05	3.09167E-05	-1.41730E-05	-1.01513E-06	1.66721E-07	-2.04155E-06
3110	5.65317E-05	3.43243E-05	-3.06158E-05	-9.16969E-07	3.44116E-07	-1.58046E-06
3113	7.69170E-05	4.25364E-05	-4.07484E-05	-7.56607E-07	4.98204E-07	-8.93399E-07
3115	8.38537E-05	4.64933E-05	-4.20867E-05	-4.27790E-07	7.29124E-07	4.04413E-07
3116	7.37019E-05	1.28163E-05	-2.08695E-05	-1.79268E-08	9.25128E-07	1.56079E-06
3119	7.42237E-05	-1.47285E-05	-6.61609E-06	1.65889E-07	9.66118E-07	1.75767E-06
3120	7.46743E-05	-5.05568E-05	1.16801E-05	3.79909E-07	9.26458E-07	1.56916E-06
3122	7.48138E-05	-7.85463E-05	2.82371E-05	5.72333E-07	7.83210E-07	8.76602E-07
3123	7.44778E-05	-8.72812E-05	4.19553E-05	7.93375E-07	4.83231E-07	-7.41396E-07
3125	5.22002E-05	-5.79565E-05	3.72278E-05	9.40414E-07	1.87641E-07	-2.50527E-06
3128	-2.27178E-05	-1.43084E-05	1.64794E-05	9.99898E-07	-3.69544E-08	-3.81388E-06
3198	-1.18434E-04	-4.20375E-06	-6.23875E-06	9.14225E-07	-1.22577E-07	-3.85901E-06
3199	-1.94531E-04	-1.68721E-05	-2.31216E-05	6.94442E-07	-1.41074E-07	-2.86532E-06
3200	-2.39860E-04	-2.43753E-05	-3.40946E-05	3.56352E-07	-1.46424E-07	-1.13836E-06

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3205	-2.41779E-04	-2.46187E-05	-3.70186E-05	-6.44247E-08	-1.53089E-07	8.77234E-07
3208	-2.00754E-04	-1.75988E-05	-3.08453E-05	-4.76484E-07	-1.82356E-07	2.32650E-06
3210	-1.35387E-04	-6.30858E-06	-1.63622E-05	-8.24865E-07	-2.63011E-07	2.37994E-06
3212	-9.88878E-05	6.84171E-06	7.29878E-06	-1.07897E-06	-3.36685E-07	1.85115E-06
3215	-7.29107E-05	3.68682E-05	3.00910E-05	-1.20355E-06	-3.00524E-07	1.58967E-06
3220	-6.39610E-05	7.18145E-05	4.41317E-05	-1.25232E-06	-1.90884E-07	7.41680E-07
3222	-5.99449E-05	7.04920E-05	3.28667E-05	-1.22592E-06	-1.02369E-07	-9.21814E-07
3225	-2.16299E-05	5.28955E-05	4.93020E-06	-1.07131E-06	-2.28381E-07	-1.53460E-06
3230	-1.01666E-05	5.34097E-05	-2.48703E-06	-9.92506E-07	-2.94046E-07	-1.51284E-06
3235	2.24789E-05	5.83637E-05	-2.32033E-05	-5.73266E-07	-5.15179E-07	-1.13549E-06
3237	4.07364E-05	6.03249E-05	-3.28822E-05	6.60582E-08	-7.13611E-07	-4.94697E-07
3238	4.20588E-05	5.88061E-05	-2.97974E-05	6.29890E-07	-8.25802E-07	-5.34958E-08
3240	3.15881E-05	4.89480E-05	-1.80176E-05	1.07519E-06	-8.40079E-07	2.18291E-07
3243	1.59327E-05	2.89398E-05	-5.39591E-06	1.13973E-06	-7.00144E-07	2.75704E-07
3245	3.34404E-06	7.25543E-06	5.67237E-08	6.04647E-07	-3.31579E-07	1.36654E-07
3250	8.75226E-10	2.14221E-09	1.43209E-10	6.04926E-10	-3.18301E-10	8.84839E-11

STATIC ANALYSIS

LOAD CASE 2 GROUP 1 Y EXCITATION

DISPLACEMENTS/ROTATIONS OF UNRESTRAINED NODES

NODE NUMBER	X-TRANSLATION	Y-TRANSLATION	Z-TRANSLATION	X-ROTATION	Y-ROTATION	Z-ROTATION
7090	2.15895E-09	3.23857E-10	6.17495E-10	-2.57440E-10	2.07093E-10	7.56235E-10
3001	2.01216E-06	1.92930E-06	1.15114E-07	-3.02859E-08	2.36548E-08	8.92196E-08
3005	2.75399E-06	2.68752E-06	1.52584E-07	-4.86040E-08	3.79646E-08	1.42696E-07
3010	3.95346E-06	3.91834E-06	2.16631E-07	-7.94027E-08	5.86688E-08	2.32080E-07
3011	6.58931E-06	6.61710E-06	3.79098E-07	-1.52245E-07	1.06623E-07	4.40385E-07
3012	1.23191E-05	1.27839E-05	7.55630E-07	-2.36700E-07	1.53206E-07	6.75572E-07
3019	2.47932E-05	2.94848E-05	1.40439E-06	-2.71832E-07	1.22643E-07	7.27999E-07
3021	2.92590E-05	4.12696E-05	1.54056E-06	-1.91122E-07	1.38686E-08	4.20434E-07
3023	2.95339E-05	4.25310E-05	1.65677E-06	-1.71272E-07	-6.73120E-09	3.48787E-07
3024	3.04471E-05	4.52726E-05	2.85944E-06	-7.64882E-08	-8.71056E-08	9.84240E-09
3026	3.12605E-05	4.20620E-05	5.41964E-06	3.72640E-08	-1.51163E-07	-3.95017E-07
3028	3.18681E-05	3.21133E-05	8.63841E-06	1.39321E-07	-1.79785E-07	-7.48916E-07
3030	3.27572E-05	3.54211E-06	1.41991E-05	2.56160E-07	-1.59760E-07	-1.10424E-06
3032	3.38533E-05	-2.99468E-05	1.80957E-05	2.81819E-07	-7.74702E-08	-1.06466E-06
3035	3.54243E-05	-5.65008E-05	1.91613E-05	2.30406E-07	3.12309E-08	-6.91427E-07
3037	3.75090E-05	-6.95109E-05	1.71953E-05	1.28774E-07	1.31880E-07	-1.00371E-07
3038	3.99523E-05	-6.33764E-05	1.28508E-05	2.10372E-08	1.98246E-07	5.17786E-07
3040	4.24722E-05	-4.19123E-05	7.31072E-06	-3.27798E-08	2.19364E-07	9.01897E-07
3044	4.34249E-05	-3.11945E-05	5.07687E-06	-3.14662E-08	2.15745E-07	9.56005E-07
3047	4.38643E-05	-2.58247E-05	4.01611E-06	-2.55909E-08	2.12133E-07	9.59464E-07
3050	4.42650E-05	-2.08953E-05	3.05634E-06	-1.70535E-08	2.07973E-07	9.48928E-07
3053	4.45091E-05	-1.66778E-05	2.23609E-06	-7.14536E-09	2.03760E-07	9.28991E-07
3056	4.42907E-05	-1.01426E-05	9.38829E-07	1.34079E-08	1.96026E-07	8.77025E-07
3059	4.41581E-05	-9.03095E-06	7.14562E-07	1.76202E-08	1.94514E-07	8.65334E-07
3062	4.34037E-05	-4.77365E-06	-1.47248E-07	3.59793E-08	1.88041E-07	8.12254E-07
3065	4.13528E-05	2.05686E-06	-1.48180E-06	7.49640E-08	1.74942E-07	6.93416E-07
3068	4.00052E-05	4.88627E-06	-1.96584E-06	9.65646E-08	1.67502E-07	6.24529E-07
3071	3.71079E-05	9.40991E-06	-2.43486E-06	1.42977E-07	1.51265E-07	4.73687E-07
3074	3.65653E-05	1.00002E-05	-2.40077E-06	1.51445E-07	1.48143E-07	4.45735E-07
3077	3.60470E-05	1.05342E-05	-2.33946E-06	1.59735E-07	1.44950E-07	4.18057E-07
3080	3.21288E-05	1.34076E-05	6.73949E-07	2.35042E-07	1.09213E-07	1.40100E-07
3083	3.17791E-05	1.34655E-05	3.98787E-06	2.48636E-07	9.00771E-08	6.20387E-08
3086	3.18135E-05	1.34726E-05	5.01681E-06	2.47986E-07	8.45581E-09	5.17619E-08
3089	3.19021E-05	1.35173E-05	7.67768E-06	2.35370E-07	6.91150E-08	4.57208E-08
3092	3.13709E-05	1.35832E-05	1.19438E-05	1.75219E-07	3.75826E-08	9.53182E-08
3095	3.00841E-05	1.36525E-05	1.38763E-05	1.16084E-07	1.58978E-08	1.55487E-07
3098	2.98085E-05	1.36642E-05	1.40984E-05	1.06073E-07	1.25724E-08	1.65672E-07
3100	2.51488E-05	1.38485E-05	1.51727E-05	-1.50616E-08	-2.50603E-08	2.77048E-07
3101	1.80731E-05	1.41209E-05	1.35001E-05	-1.36212E-07	-6.13122E-08	3.58087E-07
3104	1.77785E-05	1.41365E-05	1.33879E-05	-1.40426E-07	-6.25809E-08	3.60092E-07
3107	1.33802E-05	1.43187E-05	1.14159E-05	-1.96879E-07	-8.06647E-08	3.78621E-07
3110	6.69360E-06	1.40445E-05	7.25163E-06	-2.62751E-07	-1.03234E-07	3.68190E-07
3113	1.34083E-06	1.23118E-05	2.32466E-06	-3.01831E-07	-1.12254E-07	3.24669E-07
3115	-4.16409E-06	8.46077E-06	-5.63047E-06	-3.23496E-07	-9.37773E-08	2.20209E-07
3116	-6.12568E-06	5.04990E-06	-1.10163E-05	-3.04985E-07	-2.15755E-08	1.00945E-07
3119	-6.18074E-06	4.29261E-06	-1.10128E-05	-2.85785E-07	2.79730E-08	6.44073E-08
3120	-6.18822E-06	3.80536E-06	-9.88541E-06	-2.60466E-07	9.03491E-08	4.06685E-08
3122	-6.13098E-06	3.47603E-06	-7.61400E-06	-2.34307E-07	1.42780E-07	3.59104E-08
3123	-5.82109E-06	2.87987E-06	-2.66170E-06	-1.94997E-07	1.84449E-07	4.69555E-08
3125	-4.84058E-06	2.07883E-06	3.34734E-06	-1.45465E-07	1.92930E-07	6.47362E-08
3128	-2.92573E-06	1.26672E-06	8.33427E-06	-7.33795E-08	1.73706E-07	7.64672E-08
3198	-9.61705E-07	1.08090E-06	9.60834E-06	3.57954E-09	1.38637E-07	7.23341E-08
3199	5.15053E-07	1.24410E-06	8.37654E-06	7.61408E-08	9.92791E-08	5.77709E-08
3200	1.55965E-06	1.28092E-06	5.84584E-06	1.37200E-07	5.78664E-08	3.81603E-08

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3205	2.12942E-06	1.19488E-06	2.24934E-06	1.79951E-07	1.19914E-08	1.99456E-08
3208	2.30382E-06	1.03219E-06	-1.71101E-06	1.98456E-07	-3.58142E-08	1.20198E-08
3210	2.37953E-06	8.55858E-07	-5.63605E-06	1.95936E-07	-8.62491E-08	2.09260E-08
3212	3.09326E-06	8.47264E-07	-8.98989E-06	1.78059E-07	-1.43941E-07	2.00536E-08
3215	3.11860E-06	7.78345E-07	-8.90084E-06	1.56720E-07	-1.93441E-07	-8.96328E-09
3220	2.69647E-06	-1.61589E-07	-4.68466E-06	1.29439E-07	-2.35307E-07	-4.78744E-08
3222	3.15775E-06	-2.62593E-06	4.80595E-06	7.61882E-08	-2.53973E-07	-7.15197E-08
3225	4.45505E-06	-3.60519E-06	9.19072E-06	1.99704E-08	-2.37939E-07	-5.49926E-08
3230	4.73900E-06	-3.59811E-06	9.22010E-06	3.49834E-09	-2.30583E-07	-4.73811E-08
3235	5.27662E-06	-3.45505E-06	7.90788E-06	-4.93205E-08	-2.03913E-07	-1.99785E-08
3237	5.18980E-06	-3.35531E-06	5.55671E-06	-8.82781E-08	-1.74912E-07	4.77477E-09
3238	4.57464E-06	-3.15198E-06	3.45636E-06	-1.01322E-07	-1.50391E-07	1.70829E-08
3240	3.08422E-06	-2.31376E-06	1.57227E-06	-9.64650E-08	-1.20684E-07	2.31347E-08
3243	1.40583E-06	-1.12775E-06	3.97917E-07	-7.17498E-08	-8.30336E-08	2.08432E-08
3245	2.45524E-07	-1.95602E-07	2.20180E-08	-2.93204E-08	-3.38663E-08	9.56053E-09
3250	4.40778E-11	-3.01554E-11	5.55881E-11	-2.60280E-11	-3.04781E-11	6.19047E-12

STATIC ANALYSIS

LOAD CASE 3 GROUP 1 Z EXCITATION

DISPLACEMENTS/ROTATIONS OF UNRESTRAINED NODES

NODE NUMBER	X-TRANSLATION	Y-TRANSLATION	Z-TRANSLATION	X-ROTATION	Y-ROTATION	Z-ROTATION
7090	-2.18038E-10	7.38451E-12	-4.91844E-10	1.55825E-10	2.00159E-10	-4.72749E-11
3001	5.43261E-08	-2.91213E-07	-6.95464E-07	1.78599E-08	2.60775E-08	-5.64509E-09
3005	9.52707E-08	-4.04690E-07	-9.80218E-07	2.87544E-08	4.42007E-08	-8.64023E-09
3010	1.70560E-07	-5.87487E-07	-1.45446E-06	4.71672E-08	7.70983E-08	-1.32419E-08
3011	3.48748E-07	-9.80514E-07	-2.53171E-06	9.08916E-08	1.63084E-07	-2.24713E-08
3012	9.75449E-07	-1.85766E-06	-5.21677E-06	1.42412E-07	2.87321E-07	-2.87234E-08
3019	3.58109E-06	-3.88083E-06	-1.38030E-05	1.71692E-07	4.63539E-07	-4.03267E-09
3021	6.18473E-06	-4.51323E-06	-2.28187E-05	1.41052E-07	4.97620E-07	4.25387E-08
3023	6.53816E-06	-4.46115E-06	-2.43835E-05	1.32954E-07	4.91598E-07	5.10254E-08
3024	7.90654E-06	-3.80440E-06	-3.11025E-05	9.60417E-08	4.20711E-07	8.47821E-08
3026	9.09491E-06	-2.35752E-06	-3.72289E-05	5.43336E-08	2.51850E-07	1.11726E-07
3028	9.49619E-06	-4.75417E-07	-3.99123E-05	1.67344E-08	1.87458E-08	1.20765E-07
3030	7.95127E-06	2.84583E-06	-3.47600E-05	-3.76329E-08	-4.18992E-07	9.33111E-08
3032	3.72239E-06	5.00089E-06	-1.79417E-05	-8.20809E-08	-7.63224E-07	2.30156E-08
3035	-2.04997E-06	5.08288E-06	5.68268E-06	-1.23261E-07	-8.63531E-07	-6.13466E-08
3037	-7.49788E-06	3.24318E-06	2.80035E-05	-1.67056E-07	-6.49317E-07	-1.34477E-07
3038	-1.06285E-05	-4.30509E-08	4.03498E-05	-2.18924E-07	-1.62902E-07	-1.72587E-07
3040	-1.00614E-05	-3.33278E-06	3.68094E-05	-2.84094E-07	4.41577E-07	-1.53037E-07
3044	-8.73171E-06	-4.21598E-06	3.06727E-05	-3.13753E-07	6.71928E-07	-1.28481E-07
3047	-7.89471E-06	-4.52044E-06	2.67661E-05	-3.28917E-07	7.74352E-07	-1.13593E-07
3050	-6.98945E-06	-4.69993E-06	2.26877E-05	-3.43197E-07	8.60936E-07	-9.84253E-08
3053	-6.10656E-06	-4.77470E-06	1.87526E-05	-3.55358E-07	9.29361E-07	-8.41034E-08
3056	-4.46772E-06	-4.70857E-06	1.14974E-05	-3.71458E-07	1.02533E-06	-5.86169E-08
3059	-4.14561E-06	-4.66864E-06	1.00868E-05	-3.73675E-07	1.04055E-06	-5.37698E-08
3062	-2.78729E-06	-4.42430E-06	4.12094E-06	-3.79810E-07	1.09502E-06	-3.37174E-08
3065	-2.39365E-07	-3.68214E-06	-7.82613E-06	-3.76588E-07	1.16415E-06	4.31788E-09
3068	1.07201E-06	-3.15389E-06	-1.41834E-05	-3.65399E-07	1.15321E-06	7.39607E-08
3071	3.48960E-06	-1.88203E-06	-2.73640E-05	-3.14006E-07	1.18556E-06	6.32978E-08
3074	3.83037E-06	-1.64953E-06	-2.96254E-05	-3.00058E-07	1.18028E-06	7.01136E-08
3077	4.17082E-06	-1.41009E-06	-3.18372E-05	-2.84423E-07	1.17342E-06	7.68112E-08
3080	6.10936E-06	9.44504E-07	-5.11543E-05	1.10153E-08	1.00087E-06	1.39596E-07
3083	5.00147E-06	1.19552E-06	-5.17665E-05	2.24214E-07	8.50316E-07	1.57587E-07
3086	4.52235E-06	1.15670E-06	-5.09458E-05	2.85580E-07	8.05571E-07	1.60698E-07
3089	3.08671E-06	1.02617E-06	-4.73951E-05	4.53743E-07	6.87060E-07	1.64909E-07
3092	3.57168E-07	5.15033E-07	-3.56064E-05	7.35556E-07	4.64971E-07	1.54861E-07
3095	-1.31583E-06	8.41521E-08	-2.51910E-05	8.65375E-07	3.21646E-07	1.36616E-07
3098	-1.55091E-06	6.21538E-09	-2.34747E-05	8.80138E-07	2.99906E-07	1.33088E-07
3100	-3.79793E-06	-8.81697E-07	-2.72956E-06	9.37406E-07	5.37668E-08	8.31608E-08
3101	-4.99942E-06	-1.72890E-06	1.69285E-05	8.06056E-07	-1.91688E-07	2.05841E-08
3104	-5.02633E-06	-1.77892E-06	1.75750E-05	7.97939E-07	-2.00744E-07	1.80692E-08
3107	-5.16027E-06	-2.15535E-06	2.60688E-05	6.64332E-07	-3.31093E-07	-1.69966E-08
3110	-4.75683E-06	-2.49795E-06	3.46250E-05	4.30448E-07	-5.20455E-07	-6.62916E-08
3113	-3.96311E-06	-2.19705E-06	3.54700E-05	2.08311E-07	-6.73313E-07	-1.03024E-07
3115	-2.75364E-06	-7.09530E-08	-2.30172E-05	-9.00554E-08	-8.30505E-07	-1.27774E-07
3116	-2.80054E-06	3.85602E-06	-3.99035E-06	-3.44868E-07	-7.99838E-07	-9.28406E-08
3119	-3.26727E-06	5.28192E-06	-1.53920E-05	-4.39738E-07	-6.89939E-07	-5.51106E-08
3120	-3.71058E-06	6.24043E-06	-2.66606E-05	-5.59537E-07	-4.81280E-07	3.44945E-09
3122	-3.95059E-06	6.10060E-06	-3.32776E-05	-6.79191E-07	-2.34190E-07	6.75492E-08
3123	-3.53530E-06	4.30998E-06	-3.20617E-05	-8.23044E-07	5.96247E-08	1.46148E-07
3125	-9.25945E-07	2.10966E-06	-1.73123E-05	-8.79606E-07	2.29859E-07	1.87427E-07
3128	3.82666E-06	9.17389E-07	5.50907E-06	-7.93229E-07	2.82205E-07	1.75887E-07
3198	7.72045E-06	1.32549E-06	2.24499E-05	-5.63495E-07	2.45179E-07	1.21211E-07
3199	9.71196E-06	1.94211E-06	3.05240E-05	-2.50014E-07	1.88734E-07	5.39647E-08
3200	1.01767E-05	2.01398E-06	3.15577E-05	9.91318E-08	1.38008E-07	-1.09584E-08

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3205	9.29089E-06	1.54260E-06	2.51737E-05	4.32691E-07	8.21830E-08	-5.68844E-08
3208	7.69260E-06	7.09493E-07	1.29564E-05	6.79831E-07	1.74117E-08	-6.42790E-08
3210	6.26308E-06	-2.61190E-07	-3.07949E-06	8.21279E-07	-6.19428E-08	-2.05419E-08
3212	6.99780E-06	-1.06649E-06	-2.12880E-05	8.57887E-07	-1.75303E-07	3.35153E-09
3215	6.80770E-06	-2.30339E-06	-3.05196E-05	8.19501E-07	-3.11136E-07	-4.76057E-08
3220	5.88335E-06	-5.53094E-06	-2.63081E-05	7.33368E-07	-4.72401E-07	-1.26802E-07
3222	7.15553E-06	-1.23038E-05	-9.93856E-08	5.45018E-07	-6.04795E-07	-1.82967E-07
3225	1.06449E-05	-1.53167E-05	1.88201E-05	3.29715E-07	-6.02032E-07	-1.58762E-07
3230	1.15303E-05	-1.53549E-05	2.07446E-05	2.62909E-07	-5.86566E-07	-1.44630E-07
3235	1.36341E-05	-1.49836E-05	2.20676E-05	2.71565E-08	-5.29084E-07	-8.35337E-08
3237	1.41438E-05	-1.45764E-05	1.81313E-05	-1.88906E-07	-4.68644E-07	-1.71456E-08
3238	1.29245E-05	-1.38332E-05	1.25082E-05	-3.05057E-07	-4.15701E-07	2.11883E-08
3240	9.04013E-06	-1.07342E-05	6.23252E-06	-3.50979E-07	-3.44996E-07	4.45880E-08
3243	4.29000E-06	-5.71295E-06	1.69143E-06	-2.97759E-07	-2.44876E-07	4.57879E-08
3245	7.94051E-07	-1.18958E-06	7.14225E-08	-1.34951E-07	-1.02342E-07	2.22325E-08
3250	1.57784E-10	-2.75317E-10	1.80318E-10	-1.25919E-10	-9.32052E-11	1.43956E-11

STATIC ANALYSIS

LOAD CASE 4 GROUP 2 X EXCITATION

DISPLACEMENTS/ROTATIONS OF UNRESTRAINED NODES

NODE NUMBER	X-TRANSLATION	Y-TRANSLATION	Z-TRANSLATION	X-ROTATION	Y-ROTATION	Z-ROTATION
7090	-8.19201E-08	1.01193E-08	-1.96558E-08	3.22026E-09	-8.41302E-09	-1.79502E-08
3001	-6.16773E-05	-4.19878E-05	8.93255E-06	3.60941E-07	-9.44843E-07	-2.04563E-06
3005	-8.30293E-05	-5.79463E-05	1.25483E-05	5.58780E-07	-1.45750E-06	-3.18192E-06
3010	-1.16426E-04	-8.30591E-05	1.80090E-05	8.70016E-07	-2.26822E-06	-5.00126E-06
3011	-1.88028E-04	-1.36376E-04	2.86868E-05	1.52988E-06	-4.03160E-06	-8.99079E-06
3012	-3.33019E-04	-2.51491E-04	5.35507E-05	2.06361E-06	-5.69928E-06	-1.28289E-05
3019	-6.16084E-04	-5.16991E-04	1.22841E-04	9.75899E-07	-4.50928E-06	-1.04402E-05
3021	-7.08084E-04	-6.20159E-04	1.54812E-04	-1.31894E-06	-5.52004E-07	-1.95905E-06
3023	-7.15879E-04	-6.17481E-04	1.51881E-04	-1.73593E-06	1.95484E-07	-3.74893E-07
3024	-7.44635E-04	-5.48032E-04	1.10572E-04	-3.41195E-06	3.15244E-06	5.81418E-06
3026	-7.67993E-04	-3.73854E-04	1.89539E-05	-4.89484E-06	5.59053E-06	1.09155E-05
3028	-7.82934E-04	-1.40304E-04	-9.87507E-05	-5.82666E-06	6.78389E-06	1.36156E-05
3030	-8.00769E-04	2.97217E-04	-3.08199E-04	-6.40827E-06	6.37365E-06	1.38388E-05
3032	-8.23305E-04	6.71124E-04	-4.66027E-04	-6.11703E-06	3.73582E-06	1.02769E-05
3035	-8.60447E-04	9.09838E-04	-5.30359E-04	-5.51345E-06	1.20702E-07	5.36618E-06
3037	-9.14132E-04	1.02038E-03	-4.92703E-04	-4.65499E-06	-3.29529E-06	-6.50629E-07
3038	.79766E-04	9.35229E-04	-3.73208E-04	-3.61131E-06	-5.63439E-06	-7.47608E-06
3040	.04858E-03	6.68234E-04	-2.09554E-04	-2.97001E-06	-6.51914E-06	-1.25529E-05
3044	-1.07460E-03	5.28504E-04	-1.41908E-04	-2.93419E-06	-6.47771E-06	-1.36189E-05
3047	-1.08656E-03	4.56396E-04	-1.09500E-04	-2.97667E-06	-6.39420E-06	-1.38742E-05
3050	-1.09743E-03	3.89011E-04	-4.00876E-05	-3.05502E-06	-6.28727E-06	-1.39389E-05
3053	-1.10523E-03	3.30419E-04	-5.52306E-05	-3.15404E-06	-6.17246E-06	-1.38568E-05
3056	-1.10842E-03	2.38036E-04	-1.79257E-05	-3.37117E-06	-5.94975E-06	-1.34807E-05
3059	-1.10752E-03	2.22105E-04	-1.17889E-05	-3.41591E-06	-5.90488E-06	-1.33859E-05
3062	-1.10018E-03	1.60192E-04	1.10708E-05	-3.61113E-06	-5.71014E-06	-1.29413E-05
3065	-1.07349E-03	5.58042E-05	4.45741E-05	-4.02282E-06	-5.30416E-06	-1.19153E-05
3068	-1.05278E-03	9.65478E-06	5.56205E-05	-4.24565E-06	-5.07207E-06	-1.13257E-05
3071	-9.99928E-04	-7.27920E-05	6.52429E-05	-4.70741E-06	-4.56210E-06	-1.00615E-05
3074	-9.88261E-04	-8.50369E-05	6.40532E-05	-4.78753E-06	-4.46371E-06	-9.83510E-06
3077	-9.76475E-04	-9.66495E-05	6.22847E-05	-4.86433E-06	-4.36449E-06	-9.61421E-06
3080	-8.28657E-04	-1.91958E-04	-4.12536E-06	-5.41890E-06	-3.29052E-06	-7.29794E-06
3083	-7.47693E-04	-2.05164E-04	-7.35997E-05	-5.31827E-06	-2.77664E-06	-6.67908E-06
3086	-7.25722E-04	-2.05260E-04	-9.48938E-05	-5.22322E-06	-2.63915E-06	-6.61104E-06
3089	-6.65951E-04	-2.06122E-04	-1.48729E-04	-4.79514E-06	-2.26779E-06	-6.60275E-06
3092	-5.45411E-04	-2.07560E-04	-2.31984E-04	-3.41163E-06	-1.55702E-06	-6.90664E-06
3095	-4.61119E-04	-2.09092E-04	-2.68480E-04	-2.20133E-06	-1.09485E-06	-7.13912E-06
3098	-4.47967E-04	-2.09351E-04	-2.72601E-04	-2.00182E-06	-1.02500E-06	-7.16743E-06
3100	-2.94996E-04	-3.13324E-04	-2.91345E-04	3.61622E-07	-2.46345E-07	-7.16960E-06
3101	-1.46786E-04	-2.19034E-04	-2.57713E-04	2.67885E-06	5.01521E-07	-6.48241E-06
3104	-1.41633E-04	-2.19353E-04	-2.55510E-04	2.75919E-06	5.28794E-07	-6.44207E-06
3107	-7.11190E-05	-2.23121E-04	-2.17089E-04	3.83725E-06	9.11023E-07	-5.74881E-06
3110	1.61924E-05	-2.22191E-04	-1.37334E-04	5.10456E-06	1.41624E-06	-4.36675E-06
3113	6.97034E-05	-2.08905E-04	-4.50913E-05	5.86469E-06	1.68776E-06	-2.96164E-06
3115	1.07107E-04	-1.93280E-04	1.02960E-04	6.29419E-06	1.55790E-06	-1.19597E-06
3116	1.15052E-04	-1.94693E-04	2.05189E-04	5.93698E-06	4.76138E-07	-4.86131E-07
3119	1.15322E-04	-1.93592E-04	2.07370E-04	5.56837E-06	-3.46861E-07	-7.18031E-07
3120	1.14700E-04	-1.82038E-04	1.90922E-04	5.08751E-06	-1.43486E-06	-1.32052E-06
3122	1.13044E-04	-1.55510E-04	1.53891E-04	4.60060E-06	-2.39859E-06	-2.05494E-06
3123	1.00203E-04	-9.84530E-05	6.70744E-05	3.89443E-06	-3.22485E-06	-2.86128E-06
3125	5.49936E-05	-4.18634E-05	-4.49974E-05	3.02651E-06	-3.44557E-06	-3.11007E-06
3128	-1.60022E-05	-3.53455E-06	-1.43891E-04	1.73981E-06	-3.12031E-06	-2.64316E-06
3198	-7.00385E-05	-2.58539E-06	-1.76232E-04	3.00949E-07	-2.46511E-06	-1.73618E-06
3199	-9.67667E-05	-2.38326E-07	-1.60957E-04	-1.13018E-06	-1.73115E-06	-7.98324E-07
3200	-1.03658E-04	1.16761E-06	-1.19023E-04	-2.41009E-06	-9.78519E-07	1.65384E-08

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3205	-9.44734E-05	6.11165E-06	-5.36043E-05	-3.38768E-06	-1.61331E-07	5.35702E-07
3208	-7.78941E-05	1.25556E-05	2.27009E-05	-3.90311E-06	6.80430E-07	5.59178E-07
3210	-6.49611E-05	1.84437E-05	1.01799E-04	-3.98672E-06	1.56440E-06	-2.89859E-08
3212	-7.84377E-05	1.89764E-05	1.73426E-04	-3.72788E-06	2.59673E-06	-4.92148E-07
3215	-8.38564E-05	1.61800E-05	1.79741E-04	-3.34793E-06	3.53127E-06	-1.69183E-07
3220	-7.90680E-05	2.45705E-05	1.05179E-04	-2.83254E-06	4.37625E-06	5.00754E-07
3222	-8.38419E-05	5.92476E-05	-7.80803E-05	-1.80386E-06	4.81782E-06	1.04657E-06
3225	-1.02733E-04	7.50192E-05	-1.70099E-04	-6.85633E-07	4.55610E-06	8.48048E-07
3230	-1.07027E-04	7.49556E-05	-1.72725E-04	-3.51199E-07	4.42126E-06	7.24515E-07
3235	-1.14210E-04	7.27291E-05	-1.53156E-04	7.52824E-07	3.93342E-06	2.38653E-07
3237	-1.09539E-04	7.11709E-05	-1.11035E-04	1.62760E-06	3.40809E-06	-2.29157E-07
3238	-9.53235E-05	6.74276E-05	-7.08099E-05	1.98300E-06	2.96220E-06	-4.61510E-07
3240	-6.40273E-05	5.05745E-05	-3.30008E-05	1.97314E-06	2.40893E-06	-5.61444E-07
3243	-2.92512E-05	2.54853E-05	-8.50186E-06	1.52215E-06	1.68056E-06	-4.83335E-07
3245	-5.18143E-06	4.75550E-06	-4.18380E-07	6.42631E-07	6.93899E-07	-2.16246E-07
3250	-9.74290E-10	8.81968E-10	-1.05627E-09	5.80381E-10	6.27668E-10	-1.40020E-10

STATIC ANALYSIS

LOAD CASE 5 GROUP 2 Y EXCITATION

DISPLACEMENTS/ROTATIONS OF UNRESTRAINED DES

NODE NUMBER	X-TRANSLATION	Y-TRANSLATION	Z-TRANSLATION	X-ROTATION	Y-ROTATION	Z-ROTATION
7090	1.08573E-08	-2.13556E-08	3.21685E-09	2.79654E-09	1.00134E-09	-3.21587E-09
3001	-3.01174E-06	-1.62786E-05	-6.90086E-06	3.13278E-07	1.13481E-07	-3.46049E-07
3005	-4.06677E-06	-2.14449E-05	-9.44632E-06	4.79895E-07	1.77455E-07	-5.15628E-07
3010	-5.25379E-06	-2.86632E-05	-1.32501E-05	7.47440E-07	2.80095E-07	-7.78840E-07
3011	-6.89383E-06	-4.28536E-05	-2.08870E-05	1.36416E-06	5.04014E-07	-1.36904E-06
3012	-1.09524E-05	-7.04039E-05	-3.78796E-05	2.09688E-06	7.15634E-07	-2.07136E-06
3019	-2.23026E-05	-1.42061E-04	-7.68844E-05	2.80525E-06	5.22152E-07	-2.83954E-06
3021	-2.53819E-05	-2.10173E-04	-9.04665E-05	2.75656E-06	-2.28790E-08	-2.48438E-06
3023	-2.45323E-05	-2.20994E-04	-8.99700E-05	2.69909E-06	-1.23328E-07	-2.30100E-06
3024	-2.03461E-05	-2.58163E-04	-8.29992E-05	2.33319E-06	-5.16598E-07	-1.06641E-06
3026	-1.68138E-05	-2.69409E-04	-6.92587E-05	1.77615E-06	-8.39947E-07	9.18436E-07
3028	-1.44668E-05	-2.42321E-04	-5.21177E-05	1.22307E-06	-1.01092E-06	2.88603E-06
3030	-1.18731E-05	-1.27256E-04	-2.08665E-05	5.56377E-07	-1.02740E-06	5.04261E-06
3032	-9.54300E-06	2.10794E-05	6.25816E-06	3.45545E-07	-7.96674E-07	5.22502E-06
3035	-6.35160E-06	1.46426E-04	2.45233E-05	4.97968E-07	-4.35968E-07	3.83465E-06
3037	-1.86298E-06	2.18131E-04	3.20011E-05	8.66207E-07	-4.44767E-08	1.50814E-06
3038	3.82170E-06	2.15084E-04	2.91139E-05	1.27167E-06	2.99636E-07	-9.82080E-07
3040	1.02100E-05	1.48780E-04	1.80056E-05	1.50280E-06	5.48147E-07	-2.71523E-06
3044	1.27894E-05	1.11897E-04	1.19862E-05	1.51967E-06	6.15372E-07	-3.07824E-06
3047	1.40132E-05	9.28159E-05	8.81731E-06	1.51136E-06	6.41821E-07	-3.18210E-06
3050	1.51501E-05	7.48598E-05	5.7719CE-06	1.49389E-06	6.62683E-07	-3.23541E-06
3053	1.64655E-05	5.90686E-05	3.18375E-06	1.47106E-06	6.77856E-07	-3.24864E-06
3056	2.07876E-05	3.33366E-05	-2.18981E-07	1.41828E-06	6.96194E-07	-3.19946E-06
3059	2.19300E-05	2.87680E-05	-6.87989E-07	1.40663E-06	6.98636E-07	-3.18064E-06
3062	2.74541E-05	1.07380E-05	-2.20550E-06	1.35256E-06	7.05840E-07	-3.07224E-06
3065	4.04519E-05	-1.98968E-05	-3.72337E-06	1.22186E-06	7.08384E-07	-2.73235E-06
3068	4.85412E-05	-3.34682E-05	-3.67460E-06	1.13975E-06	7.04732E-07	-2.48495E-06
3071	6.55030E-05	-5.60143E-05	-2.64677E-06	9.37851E-07	6.87020E-07	-1.82678E-06
3074	6.85439E-05	-5.96409E-05	-2.22965E-06	8.96394E-07	6.82248E-07	-1.68535E-06
3077	7.14335E-05	-6.17973E-05	-1.81148E-06	8.54082E-07	6.77416E-07	-1.53849E-06
3080	8.62174E-05	-7.39341E-05	1.79153E-06	3.37573E-07	6.11951E-07	3.10764E-07
3083	7.42048E-05	-7.23878E-05	2.62099E-06	8.71153E-08	5.80932E-07	1.22035E-06
3086	6.85480E-05	-7.24373E-05	2.64834E-06	2.61081E-08	5.74975E-07	1.43635E-06
3089	4.97166E-05	-7.25002E-05	1.65373E-06	-1.15437E-07	5.61306E-07	1.91326E-06
3092	4.30350E-06	-7.23644E-05	-3.40508E-06	-2.94095E-07	5.54829E-07	2.38922E-06
3095	-2.75647E-05	-7.21570E-05	-7.96920E-06	-3.47603E-07	5.63698E-07	2.39526E-06
3098	-3.23251E-05	-7.21160E-05	-8.70138E-06	-3.51577E-07	5.65891E-07	2.37591E-06
3100	-8.10008E-05	-7.15848E-05	-1.69160E-05	-3.30740E-07	6.05135E-07	1.83397E-06
3101	-1.11296E-04	-7.09664E-05	-2.32301E-05	-2.13219E-07	6.64956E-07	8.20592E-07
3104	-1.11926E-04	-7.09370E-05	-2.34044E-05	-2.07497E-07	6.67005E-07	7.76491E-07
3107	-1.17117E-04	-7.05981E-05	-2.53202E-05	-1.20352E-07	7.03920E-07	1.19796E-07
3110	-1.09933E-04	-6.92492E-05	-2.50171E-05	1.43854E-08	7.54978E-07	-8.71818E-07
3113	-8.90878E-05	-6.05038E-05	-1.92087E-05	1.34526E-07	7.79057E-07	-1.67628E-06
3115	-4.53140E-05	-2.25840E-05	-1.99187E-06	2.98152E-07	7.31977E-07	-2.36044E-06
3116	-1.62387E-05	4.55763E-05	2.04398E-05	4.63760E-07	5.05661E-07	-1.98951E-06
3119	-1.53941E-05	7.17189E-05	2.67717E-05	5.36460E-07	3.36039E-07	-1.42565E-06
3120	-1.44817E-05	9.05958E-05	3.07601E-05	6.36459E-07	9.97365E-08	-5.34493E-07
3122	-1.37469E-05	9.10559E-05	3.01321E-05	7.39978E-07	-1.23205E-07	4.36851E-07
3123	-8.74333E-06	6.29141E-05	2.07588E-05	8.53114E-07	-3.28518E-07	1.58778E-06
3125	1.78156E-05	2.10242E-05	1.62192E-06	8.54936E-07	-4.01303E-07	2.15354E-06
3128	6.61988E-05	-1.20968E-05	-2.14668E-05	6.76151E-07	-3.73686E-07	1.5311E-06
3198	1.03700E-04	-1.83683E-05	-3.48805E-05	3.55017E-07	-2.91710E-07	1.17730E-06
3199	1.18394E-04	-1.66255E-05	-3.77292E-05	-2.44731E-08	-2.01358E-07	2.60539E-07
3200	1.13321E-04	-1.75413E-05	-3.26080E-05	-4.04187E-07	-1.08758E-07	-6.10276E-07

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3205	9.06544E-05	-2.08168E-05	-1.98189E-05	-7.28667E-07	9.42204E-09	-1.24644E-06
3208	5.90297E-05	-2.51660E-05	-2.22411E-06	-9.32211E-07	1.60955E-07	-1.43426E-06
3210	2.82971E-05	-2.91539E-05	1.76294E-05	-1.00776E-06	3.57075E-07	-1.07374E-06
3212	1.41381E-05	-3.20788E-05	3.66222E-05	-9.68351E-07	6.03765E-07	-4.17529E-07
3215	1.32751E-05	-3.24656E-05	3.96284E-05	-8.64999E-07	8.24974E-07	8.70055E-08
3220	1.67630E-05	-2.27937E-05	2.25877E-05	-7.05618E-07	1.02883E-06	5.06054E-07
3222	1.03017E-05	1.34714E-06	-2.07329E-05	-3.91475E-07	1.14284E-06	7.07331E-07
3225	-4.35518E-06	1.08014E-05	-4.09797E-05	-7.93583E-08	1.09182E-06	5.63875E-07
3230	-7.60474E-06	1.07754E-05	-4.09376E-05	7.19805E-09	1.06288E-06	5.04604E-07
3235	-1.54209E-05	9.51599E-06	-3.38380E-05	2.63287E-07	9.51575E-07	3.09673E-07
3237	-1.91122E-05	8.66359E-06	-2.19901E-05	4.08458E-07	8.21557E-07	1.39223E-07
3238	-1.84987E-05	7.63895E-06	-1.23999E-05	4.09396E-07	7.04544E-07	4.47668E-08
3240	-1.30401E-05	4.57847E-06	-4.99704E-06	3.26056E-07	5.58394E-07	-1.91000E-08
3243	-6.06166E-06	1.34745E-06	-1.16829E-06	1.92227E-07	3.77286E-07	-4.37261E-08
3245	-1.05055E-06	-1.47863E-07	-1.46549E-07	5.68000E-08	1.51017E-07	-2.58029E-08
3250	-1.75651E-10	-1.90176E-10	-3.69988E-10	3.92744E-11	1.34971E-10	-1.67075E-11

STATIC ANALYSIS

LOAD CASE 6 GROUP 2 Z EXCITATION

DISPLACEMENTS/ROTATIONS OF UNRESTRAINED NODES

NODE NUMBER	X-TRANSLATION	Y-TRANSLATION	Z-TRANSLATION	X-ROTATION	Y-ROTATION	Z-ROTATION
7090	-1.08069E-08	1.64817E-09	-1.37452E-08	3.20544E-09	2.10129E-09	-2.30740E-09
3001	-3.64348E-06	-8.91634E-06	-1.38325E-05	3.66229E-07	2.30504E-07	-2.62201E-07
3005	-4.89979E-06	-1.22843E-05	-1.85042E-05	5.69680E-07	3.50534E-07	-4.08474E-07
3010	-7.08179E-06	-1.75457E-05	-2.53738E-05	9.01116E-07	5.42159E-07	-6.41453E-07
3011	-1.22182E-05	-2.86073E-05	-3.95176E-05	1.66579E-06	9.80051E-07	-1.14247E-06
3012	-2.20483E-05	-5.27450E-05	-6.87812E-05	2.54339E-06	1.50270E-06	-1.58446E-06
3019	-3.60502E-05	-1.08273E-04	-1.39306E-04	3.14084E-06	1.99331E-06	-9.74902E-07
3021	-3.41187E-05	-1.29193E-04	-1.88189E-04	2.87685E-06	1.71860E-06	4.85599E-07
3023	-3.39489E-05	-1.28660E-04	-1.94544E-04	2.80092E-06	1.59781E-06	7.51204E-07
3024	-3.54069E-05	-1.15762E-04	-2.15937E-04	2.48004E-06	8.14644E-07	1.78917E-06
3026	-4.13458E-05	-8.47328E-05	-2.22384E-04	2.18196E-06	-4.31964E-07	2.64873E-06
3028	-5.20911E-05	-4.34487E-05	-2.06160E-04	1.97641E-06	-1.69204E-06	3.10508E-06
3030	-7.93653E-05	3.39457E-05	-1.35871E-04	1.79852E-06	-3.15583E-06	3.13188E-06
3032	-1.10981E-04	1.00464E-04	-4.19486E-05	1.77460E-06	-3.37080E-06	2.49126E-06
3035	-1.38558E-04	1.43132E-04	3.96688E-05	1.81116E-06	-2.41439E-06	1.58946E-06
3037	-1.56648E-04	1.62093E-04	8.25693E-05	1.89057E-06	-7.66119E-07	5.01535E-07
3038	-1.61133E-04	1.46923E-04	7.66974E-05	1.99164E-06	9.55747E-07	-6.81179E-07
3040	-1.55322E-04	1.01406E-04	2.85862E-05	2.01214E-06	2.22136E-06	-1.51392E-06
3044	-1.50897E-04	7.80815E-05	1.79529E-06	1.97971E-06	2.52840E-06	-1.66792E-06
3047	-1.48525E-04	6.62619E-05	-1.22902E-05	1.95299E-06	2.63420E-06	-1.69511E-06
3050	-1.46139E-04	5.52375E-05	-2.56345E-05	1.92136E-06	2.70628E-06	-1.68957E-06
3053	-1.43793E-04	4.57270E-05	-3.72928E-05	1.88849E-06	2.74974E-06	-1.65990E-06
3056	-1.38742E-04	3.09056E-05	-5.53210E-05	1.82879E-06	2.78342E-06	-1.56720E-06
3059	-1.37644E-04	2.83623E-05	-5.83587E-05	1.87163E-06	2.78472E-06	-1.54545E-06
3062	-1.32792E-04	1.85347E-05	-6.99927E-05	1.77303E-06	2.77663E-06	-1.44556E-06
3065	-1.22930E-04	2.44195E-06	-8.89400E-05	1.69632E-06	2.70930E-06	-1.21951E-06
3068	-1.17428E-04	-4.57361E-06	-9.66018E-05	1.66280E-06	2.65011E-06	-1.08964E-06
3071	-1.06462E-04	-1.65942E-05	-1.08519E-04	1.60909E-06	2.48704E-06	-8.07955E-07
3074	-1.04621E-04	-1.82977E-05	-1.09722E-04	1.60193E-06	2.45113E-06	-7.56675E-07
3077	-1.02804E-04	-1.99339E-05	-1.10727E-04	1.59580E-06	2.41414E-06	-7.06321E-07
3080	-8.78508E-05	-3.26938E-05	-1.07164E-04	1.51869E-06	1.96514E-06	-1.92196E-07
3083	-8.61607E-05	-3.51166E-05	-9.10164E-05	1.46284E-06	1.73199E-06	-6.00142E-08
3086	-8.61820E-05	-3.55604E-05	-8.57967E-05	1.44374E-06	1.67093E-06	-4.80925E-08
3089	-8.62327E-05	-3.65642E-05	-7.20662E-05	1.40275E-06	1.51089E-06	-6.34884E-08
3092	-8.39577E-05	-3.85231E-05	-4.66737E-05	1.32115E-06	1.21509E-06	-2.21222E-07
3095	-8.01642E-05	-3.96749E-05	-3.69718E-05	1.24548E-06	1.02599E-06	-3.78261E-07
3098	-7.93917E-05	-3.98524E-05	-2.85660E-05	1.23167E-06	9.97324E-07	-4.03985E-07
3100	-6.71655E-05	-4.16435E-05	-4.55784E-06	1.02453E-06	6.71686E-07	-6.81202E-07
3101	-4.94684E-05	-4.30892E-05	1.1751E-05	7.39586E-07	3.43052E-07	-8.87453E-07
3104	-4.87330E-05	-4.31545E-05	1.4741E-05	7.27901E-07	3.30798E-07	-8.93030E-07
3107	-3.78407E-05	-4.37561E-05	2.18712E-05	5.56676E-07	1.53626E-07	-9.49337E-07
3110	-2.12257E-05	-4.29450E-05	2.90198E-05	3.09852E-07	-1.07363E-07	-9.51237E-07
3113	-7.71578E-06	-3.78847E-05	1.98204E-05	1.10904E-07	-3.22298E-07	-8.81407E-07
3115	6.77338E-06	-2.51893E-05	2.09424E-05	-1.24844E-07	-5.68315E-07	-6.84212E-07
3116	1.20750E-05	-1.02668E-05	-2.16909E-07	-3.08746E-07	-6.46762E-07	-4.04087E-07
3119	1.18365E-05	-5.40714E-06	-9.80069E-06	-3.78213E-07	-5.96491E-07	-2.85799E-07
3120	1.15990E-05	-1.28773E-06	-2.00912E-05	-4.67266E-07	-4.67477E-07	-1.58947E-07
3122	1.14711E-05	8.43222E-07	-2.72564E-05	-5.57119E-07	-2.95847E-07	-4.89666E-08
3123	1.16257E-05	9.90763E-07	-2.92505E-05	-6.67217E-07	-7.41837E-08	-7.37096E-08
3125	1.34273E-05	-4.17498E-07	-1.97711E-05	-7.17676E-07	7.04919E-08	1.33500E-07
3128	1.69135E-05	-1.20669E-06	-2.53458E-06	-6.70338E-07	1.38526E-07	1.15230E-07
3198	1.91738E-05	-7.27039E-07	1.18701E-05	-5.18631E-07	1.40861E-07	3.88174E-08
3199	1.92159E-05	-3.89542E-07	2.01551E-05	-3.00957E-07	1.27402E-07	-5.22514E-08
3200	1.72605E-05	-5.79709E-07	2.33736E-05	-4.84578E-08	1.19741E-07	-1.36771E-07

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3205	1.35683E-05	-1.28719E-06	2.10972E-05	2.03209E-07	1.11719E-07	-1.91939E-07
3208	9.22347E-06	-2.29409E-06	1.41122E-05	4.00730E-07	9.87903E-08	-1.93772E-07
3210	5.35942E-06	-3.36401E-06	3.78703E-06	5.26602E-07	7.74112E-08	-1.28789E-07
3212	4.14835E-06	-4.37941E-06	-9.14075E-06	5.77644E-07	3.42209E-08	-5.20205E-08
3215	3.85934E-06	-5.53691E-06	-1.80322E-05	5.68617E-07	-3.67944E-08	-2.93857E-08
3220	3.67369E-06	-6.88698E-06	-1.95820E-05	5.25664E-07	-1.37758E-07	-3.18937E-08
3222	3.89359E-06	-8.96513E-06	-7.18727E-06	4.22578E-07	-2.37933E-07	-4.78435E-08
3225	4.81055E-06	-1.01514E-05	5.15100E-06	2.96091E-07	-2.54331E-07	-5.53406E-08
3230	5.13933E-06	-1.01984E-05	7.00978E-06	2.55108E-07	-2.48842E-07	-5.47744E-08
3235	6.10118E-06	-1.00749E-05	1.02694E-05	1.01449E-07	-2.28161E-07	-4.08289E-08
3237	6.51871E-06	-9.83618E-06	9.89337E-06	-5.57770E-08	-2.08468E-07	-1.62711E-08
3238	6.11972E-06	-9.40254E-06	7.43780E-06	-1.54406E-07	-1.90785E-07	8.45961E-10
3240	4.41821E-06	-7.53348E-06	3.95482E-06	-2.10483E-07	-1.63827E-07	1.30693E-08
3243	2.17282E-06	-4.19979E-06	1.11832E-06	-1.95796E-07	-1.19937E-07	1.61560E-08
3245	4.22788E-07	-9.48131E-07	3.46314E-08	-9.44416E-08	-5.13207E-08	8.39804E-09
3250	9.07317E-11	-2.47241E-10	8.74329E-11	-9.05679E-11	-4.72596E-11	5.43775E-12

STATIC ANALYSIS

LOAD CASE 7 GROUP 3 X EXCITATION

DISPLACEMENTS/ROTATIONS OF UNRESTRAINED NODES

NODE NUMBER	X-TRANSLATION	Y-TRANSLATION	Z-TRANSLATION	X-ROTATION	Y-ROTATION	Z-ROTATION
7090	-1.08974E-09	-1.83158E-10	1.84376E-10	-1.21830E-11	-3.57074E-10	-4.10446E-10
3001	-1.29898E-06	-8.42492E-07	7.27930E-07	-3.58474E-10	-4.45618E-08	-4.83661E-08
3005	-1.80219E-06	-1.17858E-06	1.02829E-06	-1.97973E-10	-7.36143E-08	-7.79363E-08
3010	-2.62648E-06	-1.72780E-06	1.52526E-06	4.59356E-10	-1.24623E-07	-1.27971E-07
3011	-4.45322E-06	-2.94515E-06	2.63871E-06	3.55395E-09	-2.52585E-07	-2.46816E-07
3012	-8.70665E-06	-5.79911E-06	5.38816E-06	1.12204E-08	-4.23225E-07	-3.87335E-07
3019	-1.94279E-05	-1.41564E-05	1.44032E-05	3.44228E-08	-6.05249E-07	-4.58224E-07
3021	-2.52089E-05	-2.13421E-05	2.43122E-05	5.72610E-08	-5.77358E-07	-3.35975E-07
3023	-2.57828E-05	-2.23222E-05	2.60119E-05	5.39630E-08	-5.77358E-07	-3.35975E-07
3024	-2.79027E-05	-2.55790E-05	2.60119E-05	5.72610E-08	-5.77358E-07	-3.35975E-07
3026	-2.97712E-05	-2.66466E-05	3.29146E-05	7.01679E-08	-4.30387E-07	-1.48174E-07
3028	-3.06589E-05	-2.44163E-05	3.83752E-05	8.25806E-08	-2.07610E-07	5.62785E-08
3030	-2.97091E-05	-1.37288E-05	3.15837E-05	9.53496E-08	5.98298E-08	2.59179E-07
3032	-2.60764E-05	2.82821E-06	1.23094E-05	1.31402E-07	5.09807E-07	5.44370E-07
3035	-2.10783E-05	2.07913E-05	-1.24784E-05	1.97843E-07	8.23033E-07	6.97732E-07
3037	-1.64906E-05	3.58954E-05	-3.50398E-05	3.01054E-07	8.84730E-07	6.91715E-07
3038	-1.39826E-05	4.22722E-05	-4.80760E-05	4.45961E-07	6.64118E-07	5.05043E-07
3040	-1.45676E-05	3.75562E-05	-4.72475E-05	6.23896E-07	2.25286E-07	1.74798E-07
3044	-1.56891E-05	3.28288E-05	-4.29393E-05	8.05276E-07	-2.92985E-07	-1.70109E-07
3047	-1.63872E-05	3.00545E-05	-4.03788E-05	8.71809E-07	-4.87393E-07	-2.84060E-07
3050	-1.71364E-05	2.72272E-05	-3.70395E-05	9.02317E-07	-5.74238E-07	-3.30715E-07
3053	-1.78166E-05	2.45941E-05	-3.40065E-05	9.28950E-07	-6.48242E-07	-3.67508E-07
3056	-1.87627E-05	2.00370E-05	-2.79231E-05	9.50511E-07	-7.07311E-07	-3.94419E-07
3059	-1.88999E-05	1.91876E-05	-2.56840E-05	9.79840E-07	-7.91616E-07	-4.28309E-07
3062	-1.93555E-05	1.56980E-05	-2.11388E-05	9.84208E-07	-8.05224E-07	-4.33153E-07
3065	-1.97201E-05	9.18596E-06	-9.30821E-06	9.98544E-07	-8.54868E-07	-4.48832E-07
3068	-1.96218E-05	5.90730E-06	-2.47357E-06	1.00935E-06	-9.22904E-07	-4.61237E-07
3071	-1.88439E-05	-5.00343E-07	1.27604E-07	1.00532E-06	-9.45505E-07	-4.59523E-07
3074	-1.85609E-05	-1.52284E-06	1.56484E-05	9.70382E-07	-9.63856E-07	-4.38925E-07
3077	-1.82799E-05	-2.53399E-06	1.85384E-05	9.59707E-07	-9.62854E-07	-4.32728E-07
3080	-1.41820E-05	-1.14327E-05	4.96763E-05	9.47506E-07	-9.60560E-07	-4.25911E-07
3083	-1.16462E-05	-1.28625E-05	5.96277E-05	6.87524E-07	-8.49206E-07	-3.04866E-07
3086	-1.10171E-05	-1.29953E-05	6.15806E-05	4.75972E-07	-7.33052E-07	-2.29722E-07
3089	-9.54518E-06	-1.32329E-05	6.52942E-05	4.08955E-07	-6.97057E-07	-2.10893E-07
3092	-7.72772E-06	-1.34052E-05	6.55476E-05	2.02531E-07	-6.01534E-07	-1.66549E-07
3095	-7.01965E-06	-1.32834E-05	6.05104E-05	-2.58450E-07	-4.21057E-07	-1.00211E-07
3098	-6.94069E-06	-1.32439E-05	5.93812E-05	-5.79124E-07	-3.03735E-07	-6.75874E-08
3100	-6.39274E-06	-1.25373E-05	4.02922E-05	-6.27479E-07	-2.85886E-07	-6.32416E-08
3101	-6.27152E-06	-1.13735E-05	1.18791E-05	-1.11700E-06	-8.29921E-08	-2.41263E-08
3104	-6.26735E-06	-1.12844E-05	1.07131E-05	-1.44713E-06	1.20570E-07	-2.68239E-09
3107	-6.25230E-06	-1.05168E-05	-6.74561E-06	-1.45538E-06	1.28084E-07	-2.15665E-09
3110	-6.14803E-06	-9.26243E-06	-3.30501E-05	-1.53871E-06	2.36577E-07	2.11570E-09
3113	-5.75812E-06	-7.91033E-06	-5.25938E-05	-1.54107E-06	4.04193E-07	-2.33169E-10
3115	-4.22546E-06	-5.48875E-06	-6.50175E-05	-1.42609E-06	5.79932E-07	-1.25217E-08
3116	-1.64856E-06	-2.16131E-06	-4.26577E-05	-5.13628E-07	9.16957E-07	-4.61264E-08
3119	-7.64654E-07	-5.56988E-07	-2.17406E-05	-2.17165E-07	1.32536E-06	-8.41516E-08
3120	4.45391E-07	1.23016E-06	7.48851E-06	-2.17165E-07	1.48572E-06	-9.17631E-08
3122	1.65598E-06	2.52808E-06	3.70404E-05	1.59199E-07	1.57293E-06	-8.97495E-08
3123	3.05253E-06	3.30475E-06	6.89191E-05	5.36158E-07	1.51013E-06	-8.07278E-08
3125	3.54665E-06	2.81957E-06	7.36466E-05	1.03785E-06	1.23001E-06	-7.55420E-08
3128	2.75615E-06	8.57463E-07	4.66402E-05	1.46891E-06	8.61019E-07	-7.90239E-08
3198	1.39178E-06	-1.60701E-06	3.96381E-06	1.82036E-06	4.46897E-07	-7.30783E-08
3199	1.23161E-06	-3.57828E-06	-3.53668E-05	1.92558E-06	9.85607E-08	-2.51742E-08
3200	3.85107E-06	-4.87392E-06	-6.76106E-05	1.76730E-06	-2.27365E-07	8.73136E-08
				1.32945E-06	-5.94607E-07	2.68753E-07

3205	1.06532E-05	-5.00966E-06	-8.72041E-05	6.26269E-07	-1.01046E-06	5.15715E-07
3208	2.21628E-05	-3.62165E-06	-8.83876E-05	-2.07564E-07	-1.43574E-06	8.22088E-07
3210	3.97416E-05	-4.53140E-07	-6.99436E-05	-1.05297E-06	-1.85777E-06	1.24944E-06
3212	7.30567E-05	1.05246E-05	-2.41302E-05	-1.80376E-06	-2.26335E-06	1.41140E-06
3215	8.96453E-05	3.17600E-05	4.45372E-05	-2.28095E-06	-2.39621E-06	1.22029E-06
3220	9.26084E-05	5.84254E-05	1.17361E-04	-2.62822E-06	-2.06126E-06	1.49936E-06
3222	5.98027E-05	1.29289E-04	1.35365E-04	-3.07747E-06	-6.57349E-07	3.66139E-06
3225	-6.17844E-05	1.90600E-04	5.44122E-05	-3.36363E-06	1.02670E-06	5.71223E-06
3230	-1.04585E-04	1.88974E-04	3.07518E-05	-3.40864E-06	1.46653E-06	5.99334E-06
3235	-2.48026E-04	1.65273E-04	-4.09280E-05	-3.04178E-06	3.06253E-06	5.54836E-06
3237	-3.53253E-04	1.45338E-04	-8.97132E-05	-1.62887E-06	4.90519E-06	3.29921E-06
3238	-3.75083E-04	1.37060E-04	-9.38578E-05	1.09822E-07	6.32801E-06	1.14671E-06
3240	-3.12052E-04	1.22094E-04	-6.20812E-05	1.86398E-06	7.27101E-06	-6.18034E-07
3243	-1.83705E-04	7.99681E-05	-1.93686E-05	2.65351E-06	6.88447E-06	-1.38028E-06
3245	-4.90176E-05	2.25915E-05	8.54604E-07	1.59607E-06	3.67582E-06	8.00106E-07
3250	-1.66207E-08	7.27789E-09	2.15759E-09	1.66959E-09	3.78139E-09	5.18071E-10

STATIC ANALYSIS

LOAD CASE 8 GROUP 3 Y EXCITATION

DISPLACEMENTS/ROTATIONS OF UNRESTRAINED NODES

NODE NUMBER	X-TRANSLATION	Y-TRANSLATION	Z-TRANSLATION	X-ROTATION	Y-ROTATION	Z-ROTATION
7090	8.10185E-10	-1.62931E-10	-4.13564E-10	1.61179E-10	4.17930E-10	1.53376E-10
3001	8.95732E-07	1.22691E-07	-1.10726E-06	1.70684E-08	5.36036E-08	1.61255E-08
3005	1.24063E-06	1.66967E-07	-1.56429E-06	2.69618E-08	8.95341E-08	2.45349E-08
3010	1.80527E-06	2.34235E-07	-2.32247E-06	4.31533E-08	1.53558E-07	3.72780E-08
3011	3.05306E-06	3.72493E-07	-4.02800E-06	7.96724E-08	3.17157E-07	6.23645E-08
3012	5.94032E-06	5.98342E-07	-8.26449E-06	1.17353E-07	5.43734E-07	7.68349E-08
3019	1.34555E-05	6.74870E-07	-2.18700E-05	1.08898E-07	8.23504E-07	6.61978E-09
3021	1.85401E-05	-5.69652E-07	-3.63420E-05	3.47534E-08	8.39061E-07	-1.04722E-07
3023	1.92405E-05	-9.80876E-07	-3.88537E-05	1.75730E-08	8.22459E-07	-1.23602E-07
3024	2.20729E-05	-3.34038E-06	-4.94869E-05	-6.68204E-08	6.88799E-07	-1.91877E-07
3026	2.47209E-05	-6.68051E-06	-5.90471E-05	-1.78630E-07	4.19705E-07	-2.35675E-07
3028	2.61597E-05	-9.89829E-06	-6.33900E-05	-2.98879E-07	6.95735E-08	-2.42703E-07
3030	2.53191E-05	-1.36871E-05	-5.65840E-05	-5.16930E-07	-5.75382E-07	-1.99830E-07
3032	2.04984E-05	-1.41816E-05	-3.27382E-05	-7.40192E-07	-1.10203E-06	-1.33527E-07
3035	1.31104E-05	-1.16082E-05	2.11306E-06	-9.55497E-07	-1.32865E-06	-1.01694E-07
3037	5.42872E-06	-7.81181E-06	3.80698E-05	-1.15914E-06	-1.16688E-06	-1.20867E-07
3038	-8.65303E-08	-3.79571E-06	6.43678E-05	-1.35175E-06	-6.5108E-07	-1.87486E-07
3040	-1.54237E-06	-1.13013E-06	7.29089E-05	-1.53226E-06	6.68946E-08	-3.06434E-07
3044	-8.01230E-07	-7.54943E-07	7.05249E-05	-1.60068E-06	3.64418E-07	-3.66489E-07
3047	-1.83466E-07	-8.02196E-07	6.81770E-05	-1.63352E-06	5.03550E-07	-3.97884E-07
3050	5.50011E-07	-9.10264E-07	6.53547E-05	-1.66358E-06	6.25977E-07	-4.28026E-07
3053	1.34706E-06	-1.09570E-06	6.22414E-05	-1.68891E-06	7.26879E-07	-4.54936E-07
3056	3.17772E-06	-1.60209E-06	5.51727E-05	-1.72493E-06	8.77538E-07	-4.98082E-07
3059	3.59771E-06	-1.70990E-06	5.36072E-05	-1.73055E-06	9.02848E-07	-5.05580E-07
3062	5.55975E-06	-2.19506E-06	4.64794E-05	-1.75016E-06	9.98524E-07	-5.34161E-07
3065	1.01682E-05	-3.41741E-06	3.02616E-05	-1.77163E-06	1.14509E-06	-5.76903E-07
3068	1.31836E-05	-4.02431E-06	2.03824E-05	-1.77303E-06	1.20429E-06	-5.91521E-07
3071	2.04212E-05	-5.35884E-06	-2.58994E-06	-1.74714E-06	1.28675E-06	-5.99194E-07
3074	2.18935E-05	-5.58897E-06	-7.12731E-06	-1.73757E-06	1.29572E-06	-5.96635E-07
3077	2.34130E-05	-5.17719E-06	-1.17119E-05	-1.72614E-06	1.30277E-06	-5.92572E-07
3080	4.11720E-05	-6.77236E-06	-6.48167E-05	-1.43022E-06	1.24160E-06	-4.26764E-07
3083	4.76869E-05	-6.17460E-06	-8.56161E-05	-1.15823E-06	1.11074E-06	-2.50082E-07
3086	4.88607E-05	-5.93684E-06	-9.02997E-05	-1.06661E-06	1.06760E-06	-1.92066E-07
3089	5.06225E-05	-5.50893E-06	-1.00685E-04	-7.69586E-07	9.52115E-07	-2.46037E-08
3092	4.87778E-05	-5.00735E-06	-1.10167E-04	-5.11090E-08	7.34738E-07	3.11998E-07
3095	4.38177E-05	-5.03174E-06	-1.07983E-04	4.85025E-07	5.94075E-07	5.23520E-07
3098	4.28233E-05	-5.06426E-06	-1.07037E-04	5.68532E-07	5.72831E-07	5.53759E-07
3100	2.76588E-05	-5.87617E-06	-8.51338E-05	1.46990E-06	3.34851E-07	8.22236E-07
3101	7.87617E-06	-7.48377E-06	-4.48316E-05	2.19213E-06	1.04856E-07	9.13450E-07
3104	7.12016E-06	-7.61576E-06	-4.30680E-05	2.21366E-06	9.65690E-08	9.12663E-07
3107	-3.71538E-06	-8.76222E-06	-1.58247E-05	2.47101E-06	-2.11271E-08	8.65544E-07
3110	-1.80685E-05	-1.19738E-05	2.86241E-05	2.66055E-06	-2.04560E-07	6.64945E-07
3113	-2.67647E-05	-1.74827E-05	6.68825E-05	2.63459E-06	-4.21245E-07	3.55871E-07
3115	-2.96165E-05	-2.18960E-05	1.04713E-04	2.26450E-06	-9.20963E-07	-2.52470E-07
3116	-2.58092E-05	-7.08982E-06	9.07171E-05	1.50323E-06	-1.69920E-06	-8.39688E-07
3119	-2.71514E-05	6.75256E-06	6.28995E-05	1.07551E-06	-2.09526E-06	-9.62107E-07
3120	-2.91224E-05	2.55867E-05	1.96366E-05	5.41934E-07	-2.46326E-06	-9.17235E-07
3122	-3.12620E-05	4.18506E-05	-2.89986E-05	1.72811E-08	-2.60761E-06	-6.56098E-07
3123	-3.55129E-05	5.29243E-05	-9.19015E-05	-6.87544E-07	-2.40836E-06	-3.79847E-08
3125	-3.44906E-05	4.86597E-05	-1.22721E-04	-1.37418E-06	-1.89425E-06	6.55358E-07
3128	-1.48818E-05	3.77409E-05	-1.06790E-04	-2.14233E-06	-1.12042E-06	1.23207E-06
3198	1.63927E-05	3.64333E-05	-5.36932E-05	-2.72897E-06	-3.41378E-07	1.40808E-06
3199	4.57483E-05	4.28659E-05	7.00029E-06	-3.01070E-06	4.13386E-07	1.28437E-06
3200	7.08111E-05	4.83941E-05	6.76895E-05	-2.86432E-06	1.22555E-06	9.18272E-07

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3205	8.69768E-05	5.18674E-05	1.19425E-04	-2.20215E-06	2.13558E-06	3.39934E-07
3208	8.98625E-05	5.19719E-05	1.48262E-04	-1.09907E-06	3.08980E-06	-2.96828E-07
3210	7.99518E-05	4.84761E-05	1.47001E-04	3.13430E-07	4.09862E-06	-8.22169E-07
3212	7.00162E-05	3.87910E-05	9.35419E-05	1.92145E-06	5.10496E-06	-2.18911E-06
3215	3.32265E-05	-1.60115E-05	-2.92659E-05	3.30326E-06	5.60261E-06	-4.33278E-06
3220	9.13914E-06	-1.56051E-04	-1.90173E-04	4.65775E-06	5.50887E-06	-6.07038E-06
3222	9.91072E-05	-3.79266E-04	-2.90909E-04	6.33266E-06	4.31213E-06	-5.60352E-06
3225	2.18352E-04	-4.46623E-04	-1.67843E-04	7.09342E-06	2.90468E-06	-3.50029E-06
3230	2.41343E-04	-4.46697E-04	-1.16798E-04	7.13550E-06	2.56586E-06	-2.88779E-06
3235	2.83113E-04	-4.40332E-04	5.32852E-05	6.12115E-06	1.27088E-06	-6.50027E-07
3237	2.67595E-04	-4.37202E-04	1.78754E-04	2.72806E-06	-3.91614E-07	1.37452E-06
3238	2.26487E-04	-4.34810E-04	2.03043E-04	-1.55682E-06	-1.81760E-06	2.24652E-06
3240	1.62404E-04	-3.93304E-04	1.41700E-04	-6.10497E-06	-2.93605E-06	2.36993E-06
3243	8.55592E-05	-2.61935E-04	4.57986E-05	-8.30625E-06	-3.09932E-06	1.80099E-06
3245	2.01615E-05	-7.76611E-05	-2.76068E-06	-5.10732E-06	-1.66703E-06	7.26941E-07
3250	5.98073E-09	-2.68753E-08	-6.96980E-09	-5.45620E-09	-1.67115E-09	4.70696E-10

STATIC ANALYSIS

LOAD CASE 9 GROUP 3 Z EXCITATION

DISPLACEMENTS/ROTATIONS OF UNRESTRAINED NODES

NODE NUMBER	X-TRANSLATION	Y-TRANSLATION	Z-TRANSLATION	X-ROTATION	Y-ROTATION	Z-ROTATION
7090	-5.34679E-10	-1.74317E-10	8.04375E-11	1.92335E-11	-1.70030E-10	-2.44786E-10
3001	-6.94200E-07	-5.33298E-07	3.07360E-07	2.82578E-09	-2.11378E-08	-2.92448E-08
3005	-9.66293E-07	-7.47946E-07	4.33784E-07	4.83788E-09	-3.48858E-08	-4.75139E-08
3010	-1.41323E-06	-1.10062E-06	6.42743E-07	8.53234E-09	-5.89924E-08	-7.88245E-08
3011	-2.40625E-06	-1.88695E-06	1.11091E-06	1.84534E-08	-1.19388E-07	-1.54592E-07
3012	-4.75131E-06	-3.76613E-06	2.26179E-06	3.32152E-08	-1.99643E-07	-2.48225E-07
3019	-1.07411E-05	-9.49561E-06	6.12166E-06	5.61276E-08	-2.84271E-07	-3.16267E-07
3021	-1.38856E-05	-1.48706E-05	1.06071E-05	6.49278E-08	-2.69872E-07	-2.60956E-07
3023	-1.41656E-05	-1.56769E-05	1.13977E-05	6.55984E-08	-2.60504E-07	-2.43989E-07
3024	-1.51614E-05	-1.86554E-05	1.46116E-05	6.56016E-08	-1.99421E-07	-1.52198E-07
3026	-1.60314E-05	-2.04077E-05	1.71223E-05	6.04418E-08	-9.34035E-08	-1.81399E-08
3028	-1.64321E-05	-1.98164E-05	1.76700E-05	5.27930E-08	3.33900E-08	1.26763E-07
3030	-1.59421E-05	-1.34361E-05	1.36938E-05	4.54231E-08	2.45342E-07	3.43888E-07
3032	-1.41846E-05	-1.84216E-06	4.49081E-06	5.73987E-08	3.89975E-07	4.89221E-07
3035	-1.18030E-05	1.17882E-05	-7.18513E-06	9.77123E-08	4.12373E-07	5.05712E-07
3037	-9.65793E-06	2.38581E-05	-1.75834E-05	1.71808E-07	2.98720E-07	3.75758E-07
3038	-8.55090E-06	-2.97468E-05	-2.32042E-05	2.73786E-07	8.17846E-08	1.24702E-07
3040	-8.95190E-06	2.71733E-05	-2.20343E-05	3.82545E-07	-1.69066E-07	-1.55517E-07
3044	-9.53757E-06	2.38507E-05	-1.96543E-05	4.22768E-07	-2.61506E-07	-2.54339E-07
3047	-9.89360E-06	2.18243E-05	-1.81326E-05	4.41124E-07	-3.02336E-07	-2.96640E-07
2950	-1.02721E-05	1.97303E-05	-1.65412E-05	4.57009E-07	-3.36805E-07	-3.31390E-07
3053	-1.05975E-05	1.77523E-05	-1.49727E-05	4.69796E-07	-3.64035E-07	-3.58054E-07
3056	-1.09241E-05	1.42684E-05	-1.18676E-05	4.87218E-07	-4.02260E-07	-3.94000E-07
3059	-1.09435E-05	1.36128E-05	-1.12294E-05	4.89820E-07	-4.08332E-07	-3.99475E-07
3062	-1.09040E-05	1.09013E-05	-8.43947E-06	4.98363E-07	-4.30134E-07	-4.18252E-07
3065	-1.03100E-05	5.75339E-06	-2.50557E-06	5.04784E-07	-4.58273E-07	-4.37937E-07
3068	-9.67978E-06	3.14645E-06	9.04575E-07	5.02387E-07	-4.66390E-07	-4.40102E-07
3071	-7.78173E-06	-1.98853E-06	8.45977E-06	4.81730E-07	-4.68694E-07	-4.26057E-07
3074	-7.30672E-06	-2.81177E-06	9.88497E-06	4.75430E-07	-4.66876E-07	-4.20669E-07
3077	-6.82577E-06	-3.61972E-06	1.13080E-05	4.68248E-07	-4.64400E-07	-4.14450E-07
3080	-7.60724E-07	-1.05744E-05	2.63188E-05	3.17414E-07	-3.93578E-07	-2.83715E-07
3083	1.99483E-06	-1.15475E-05	3.07655E-05	1.96305E-07	-3.27790E-07	-1.87248E-07
3086	2.56239E-06	-1.16145E-05	3.15781E-05	1.58471E-07	-3.07677E-07	-1.60421E-07
3089	3.62942E-06	-1.17343E-05	3.29136E-05	4.42528E-08	-2.54472E-07	-9.16999E-08
3092	3.86495E-06	-1.17950E-05	3.17590E-05	-2.02467E-07	-1.53620E-07	2.43040E-08
3095	2.95063E-06	-1.17074E-05	2.82557E-05	-3.68471E-07	-8.77890E-08	8.66496E-08
3098	2.74817E-06	-1.16823E-05	2.75354E-05	-3.93070E-07	-7.77334E-08	9.50225E-08
3100	-4.25891E-07	-1.12656E-05	1.62204E-05	-6.32030E-07	3.74387E-08	1.63250E-07
3101	-4.42546E-06	-1.06203E-05	5.58800E-07	-7.70837E-07	1.54925E-07	1.77663E-07
3104	-4.56787E-06	-1.05723E-05	-6.53266E-08	-7.73589E-07	1.59295E-07	1.77122E-07
3107	-6.58199E-06	-1.01622E-05	-9.25704E-08	-7.92746E-07	2.22867E-07	1.60220E-07
3110	-8.92771E-06	-9.72244E-06	-2.23828E-05	-7.52415E-07	3.20868E-07	1.06240E-07
3113	-9.81753E-06	-9.51140E-06	-3.08992E-05	-6.49900E-07	4.20187E-07	3.04764E-08
3115	-8.44857E-06	-7.93881E-06	-3.29245E-05	-3.98596E-07	6.00596E-07	-1.06108E-07
3116	-5.34165E-06	-2.32323E-06	-1.58068E-05	-2.57648E-08	7.95806E-07	-2.17941E-07
3119	-4.78155E-06	1.23415E-06	-3.43358E-06	1.65647E-07	8.59488E-07	-2.31546E-07
3120	-4.02797E-06	5.49525E-06	1.31148E-05	4.10230E-07	8.69491E-07	-2.04884E-07
3122	-3.28429E-06	8.60129E-06	2.90345E-05	6.57017E-07	7.97896E-07	-1.31540E-07
3123	-2.43814E-06	9.35501E-06	4.38224E-05	9.84617E-07	6.22693E-07	1.90176E-08
3125	-2.23638E-07	5.79707E-06	3.97534E-05	1.24360E-06	4.57457E-07	1.62853E-07
3128	5.53723E-06	2.78035E-07	1.57606E-05	1.37840E-06	3.50234E-07	2.44948E-07
3198	1.19057E-05	-2.29374E-06	-1.48062E-05	1.26800E-06	3.20048E-07	2.18289E-07
3199	1.61390E-05	-2.79855E-06	-3.99125E-05	9.25859E-07	2.96441E-07	1.21283E-07
3200	1.77267E-05	-3.33194E-06	-5.55485E-05	3.76698E-07	2.38208E-07	-2.00845E-08

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3205	1.58385E-05	-3.83477E-06	-5.75925E-05	-3.29659E-07	1.55687E-07	-1.80403E-07
3208	1.06038E-05	-4.18307E-06	-4.39125E-05	-1.04044E-06	7.24918E-08	-3.11228E-07
3210	2.94544E-06	-4.28147E-06	-1.55664E-05	-1.64908E-06	8.38796E-09	-3.76452E-07
3212	-5.53198E-06	-4.76840E-06	2.69462E-05	-2.07786E-06	9.99936E-09	-3.76848E-07
3215	-1.10999E-05	-7.64944E-06	6.01994E-05	-2.26350E-06	1.81416E-07	-3.10455E-07
3220	-1.22969E-05	-1.03600E-05	6.79379E-05	-2.31340E-06	5.82312E-07	-1.54392E-07
3222	-9.97159E-06	-7.26753E-06	1.14807E-05	-2.16921E-06	1.10901E-06	-1.33590E-08
3225	-7.44062E-06	-2.57044E-06	-5.50734E-05	-1.61540E-06	1.18200E-06	-1.17694E-07
3230	-5.84904E-06	-1.55431E-06	-6.58424E-05	-1.36567E-06	1.12716E-06	-1.60074E-07
3235	4.74334E-07	2.13927E-06	-8.34487E-05	-2.71334E-07	9.40635E-07	-1.74724E-07
3237	4.05614E-06	4.75166E-06	-7.10981E-05	8.40174E-07	7.49876E-07	-4.41215E-08
3238	4.72846E-06	3.80511E-06	-4.56744E-05	1.22071E-06	5.45424E-07	6.48198E-08
3240	5.87618E-06	-5.49984E-06	-2.16535E-05	1.01177E-06	2.90220E-07	1.18422E-07
3242	5.41478E-06	-1.36201E-05	-8.72315E-06	3.96207E-07	5.05754E-08	1.06809E-07
3245	2.31758E-06	-8.55561E-06	-3.74868E-06	-9.41852E-08	-5.53258E-08	4.52213E-08
3250	9.76407E-10	-3.83779E-09	-1.00425E-08	-2.51361E-10	-9.03459E-11	2.92809E-11

PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
1	TANGENT	1	END-I	-140.384	-20.748	101.143	541.58	-5744.71	242.64
			END-J	-140.384	-20.748	101.143	541.58	-3849.38	631.43
1	TANGENT	2	END-I	158.020	153.164	-55.161	74.36	2601.66	7831.43
			END-J	158.020	153.164	-55.161	74.36	1567.99	4961.28
1	TANGENT	3	END-I	-35.842	-24.793	-31.555	-264.90	2273.06	-1192.06
			END-J	-35.842	-24.793	-31.555	-264.90	1681.75	-727.47
1	TANGENT	4	END-I	-7147.554	-3880.158	2419.361	-1689.10	-104735.95	-171357.76
			END-J	-7147.554	-3880.158	2419.361	-1689.10	-59399.44	-98647.32
1	TANGENT	5	END-I	2138.617	-1094.306	-267.768	671.50	12803.27	-41858.56
			END-J	2138.617	-1094.306	-267.768	671.50	7785.57	-21352.31
1	TANGENT	6	END-I	-1416.793	-813.142	-644.876	845.73	26463.50	-36061.16
			END-J	-1416.793	-813.142	-644.876	845.73	14379.14	-20823.66
1	TANGENT	7	END-I	-58.347	-64.378	70.724	318.31	-4165.64	-3486.79
			END-J	-58.347	-64.378	70.724	318.31	-2840.34	-2280.42
1	TANGENT	8	END-I	49.513	15.456	-76.481	-676.55	4657.61	515.52
			END-J	49.513	15.456	-76.481	-676.55	3224.42	225.89
1	TANGENT	9	END-I	-24.116	-38.744	33.834	125.85	-2002.03	-2212.72
			END-J	-24.116	-38.744	33.834	125.85	-1368.01	-1486.70
2	TANGENT	1	END-I	-140.359	-20.681	100.996	540.11	-3849.55	631.65
			END-J	-140.359	-20.681	100.996	540.11	-3395.92	724.54
2	TANGENT	2	END-I	158.054	152.849	-55.120	75.47	1568.31	4961.16
			END-J	158.054	152.849	-55.120	75.47	1320.69	4274.62
2	TANGENT	3	END-I	-35.847	-24.726	-31.503	-264.30	1681.81	-727.56
			END-J	-35.847	-24.726	-31.503	-264.30	1540.31	-616.50
2	TANGENT	4	END-I	-7041.563	-3800.971	2344.270	-1722.48	-59405.76	-98642.94
			END-J	-7041.563	-3800.971	2344.270	-1722.48	-48876.18	-81570.40
2	TANGENT	5	END-I	2042.717	-963.098	-267.797	672.48	7783.79	-21352.92
			END-J	2042.717	-963.098	-267.797	672.48	6580.94	-17327.05
2	TANGENT	6	END-I	-1382.850	-788.126	-572.519	849.38	14377.33	-20824.76
			END-J	-1382.850	-788.126	-572.519	849.38	11805.79	-17284.80
2	TANGENT	7	END-I	-58.358	-64.258	70.619	316.96	-2840.63	-2280.25
			END-J	-58.358	-64.258	70.619	316.96	-2523.43	-1991.63
2	TANGENT	8	END-I	49.502	15.424	-76.388	-675.25	3224.71	225.73
			END-J	49.502	15.424	-76.388	-675.25	2881.60	156.46

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PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
2	TANGENT	9	END-I END-J	-24.122 -24.122	-38.678 -38.678	33.783 33.783	125.16 125.16	-1368.16 -1216.42	-1486.62 -1312.89
3	TANGENT	1	END-I END-J	-140.306 -140.306	-20.679 -20.679	100.635 100.635	540.11 540.11	-3395.92 -2943.90	724.54 817.42
3	TANGENT	2	END-I END-J	158.015 158.015	152.279 152.279	-54.998 -54.998	75.47 75.47	1320.69 1073.67	4274.62 3590.64
3	TANGENT	3	END-I END-J	-35.819 -35.819	-24.608 -24.608	-31.406 -31.406	-264.30 -264.30	1540.31 1399.24	-616.50 -505.97
3	TANGENT	4	END-I END-J	-6864.695 -6864.695	-3675.910 -3675.910	2219.389 2219.389	-1722.48 -1722.48	-48876.18 -38907.52	-81570.40 -65059.60
3	TANGENT	5	END-I END-J	1885.389 1885.389	-746.230 -746.230	-267.536 -267.536	672.48 672.48	6580.94 5379.27	-17027.05 -13675.27
3	TANGENT	6	END-I END-J	-1326.252 -1326.252	-747.808 -747.808	-453.905 -453.905	849.38 849.38	11805.79 9767.02	-17284.80 -13925.92
3	TANGENT	7	END-I END-J	-58.337 -58.337	-64.046 -64.046	70.363 70.363	316.96 316.96	-2523.43 -2207.39	-1991.63 -1703.96
3	TANGENT	8	END-I END-J	49.487 49.487	15.425 15.425	-76.150 -76.150	-675.25 -675.25	2881.60 2539.57	156.46 67.17
3	TANGENT	9	END-I END-J	-24.117 -24.117	-38.551 -38.551	33.657 33.657	125.16 125.16	-1216.42 -1065.25	-1312.89 -1139.73
4	TANGENT	1	END-I END-J	-140.893 -140.893	-21.034 -21.034	99.308 99.308	532.83 532.83	-2947.96 -2440.00	807.52 915.11
4	TANGENT	2	END-I END-J	158.430 158.430	151.863 151.863	-53.196 -53.196	53.63 53.63	1057.42 785.32	3595.85 2819.07
4	TANGENT	3	END-I END-J	-35.618 -35.618	-24.326 -24.326	-31.638 -31.638	-260.10 -260.10	1401.71 1239.88	-501.31 -376.88
4	TANGENT	4	END-I END-J	-6765.231 -6765.231	-3599.385 -3599.385	2079.691 2079.691	-1340.72 -1340.72	-38612.63 -27975.02	-65244.01 -46833.15
4	TANGENT	5	END-I END-J	1783.935 1783.935	-605.802 -605.802	-258.769 -258.769	762.50 762.50	5440.34 4116.73	-13646.36 -10547.68
4	TANGENT	6	END-I END-J	-1287.437 -1287.437	-718.903 -718.903	-388.228 -388.228	944.15 944.15	9829.03 7843.25	-13876.10 -10198.91
4	TANGENT	7	END-I END-J	-58.803 -58.803	-64.118 -64.118	69.456 69.456	326.09 326.09	-2199.92 -1844.66	-1711.87 -1383.90

PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
4	TANGENT	8	END-I	49.963	15.733	-75.542	-673.95	2539.65	94.37
			END-J	49.963	15.733	-75.542	-673.95	2153.26	13.90
4	TANGENT	9	END-I	-24.347	-38.555	33.214	131.57	-1060.20	-1143.72
			END-J	-24.347	-38.555	33.214	131.57	-890.31	-946.51
5	TANGENT	1	END-I	-140.589	-21.094	98.975	537.38	-2438.13	917.43
			END-J	-140.589	-21.094	98.975	537.38	-1590.29	1098.12
5	TANGENT	2	END-I	158.092	150.993	-53.501	58.11	789.24	2817.88
			END-J	158.092	150.993	-53.501	58.11	330.94	1524.44
5	TANGENT	3	END-I	-35.614	-24.212	-31.344	-262.25	1239.06	-378.08
			END-J	-35.614	-24.212	-31.344	-262.25	970.57	-170.67
5	TANGENT	4	END-I	-6634.228	-3519.230	2013.788	-1398.03	-28040.70	-46792.18
			END-J	-6634.228	-3519.230	2013.788	-1398.03	-10790.12	-16645.63
5	TANGENT	5	END-I	1675.054	-457.249	-260.838	737.60	4103.15	-10554.74
			END-J	1675.054	-457.249	-260.838	737.60	1868.74	-6637.84
5	TANGENT	6	END-I	-1248.484	-693.486	-303.619	915.63	7830.34	-10211.42
			END-J	-1248.484	-693.486	-303.619	915.63	5229.47	-4270.85
5	TANGENT	7	END-I	-58.566	-63.724	69.207	325.57	-1846.18	-1382.00
			END-J	-58.566	-63.724	69.207	325.57	-1253.33	-836.12
5	TANGENT	8	END-I	49.781	15.686	-75.246	-676.40	2152.50	12.24
			END-J	49.781	15.686	-75.246	-676.40	1507.92	-122.12
5	TANGENT	9	END-I	-24.231	-38.310	33.094	130.78	-891.45	-945.54
			END-J	-24.231	-38.310	33.094	130.78	-607.96	-617.37
6	BEND	1	END-I	-140.067	-63.896	75.892	539.08	-1918.12	232.07
			CENTER	-145.880	-49.198	75.892	375.57	-1262.95	755.27
			END-J	-150.156	-33.981	75.892	280.09	-594.46	1140.08
6	BEND	2	END-I	157.877	154.953	21.243	62.56	-415.15	1503.51
			CENTER	172.933	137.949	21.243	29.74	-223.34	148.47
			END-J	186.166	119.490	21.243	16.76	-29.18	-1042.51
6	BEND	3	END-I	-35.596	-6.653	-37.833	-261.92	938.61	300.52
			CENTER	-36.091	-2.968	-37.833	-182.24	611.39	345.03
			END-J	-36.205	.748	-37.833	-136.54	277.72	355.30
6	BEND	4	END-I	-6389.111	-3838.886	100.788	-1452.50	-1822.29	-19749.12
			CENTER	-6749.056	-3163.547	100.788	-1583.88	-733.67	12645.93
			END-J	-7037.858	-2454.860	100.788	-1602.95	362.69	38638.11
6	BEND	5	END-I	1458.619	-38.513	-316.538	720.94	4739.10	-5011.82
			CENTER	1446.982	-187.869	-316.538	1052.92	1719.15	-3964.52
			END-J	1420.092	-335.245	-316.538	1073.49	-1318.92	-1544.46

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PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	X-SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
6	BEND	6	END-I	-1172.574	-494.761	-425.380	906.21	6615.53	-1354.94
			CENTER	-1217.534	-275.903	-425.380	1379.97	2562.07	2691.48
			END-J	-1249.660	-249.082	-425.380	1433.62	-1518.39	5582.82
6	BEND	7	END-I	-58.329	-86.529	30.915	322.25	-721.22	-1323.61
			CENTER	-66.894	-80.092	30.915	261.26	-45.18	-552.77
			END-J	-74.753	-72.811	30.915	226.85	-204.23	154.60
6	BEND	8	END-I	49.522	48.139	-57.976	-675.49	1391.67	594.32
			CENTER	54.197	42.808	-57.976	-556.74	918.59	173.59
			END-J	58.301	37.025	-57.976	-487.12	435.81	-195.75
6	BEND	3	END-I	-24.142	-48.108	11.235	128.59	-251.47	-829.51
			CENTER	-28.947	-45.379	11.235	107.46	-159.65	-397.02
			END-J	-33.447	-42.172	11.235	95.85	-66.14	8.02
7	BEND	1	END-I	-152.046	-13.010	68.510	199.70	-650.83	1126.13
			CENTER	-152.601	409	68.510	165.58	-123.72	1176.08
			END-J	-151.974	13.826	68.510	177.94	404.36	1119.65
7	BEND	2	END-I	197.529	81.770	18.508	7.52	-10.01	-1042.97
			CENTER	204.054	64.077	18.508	13.06	135.83	-1621.17
			END-J	208.898	45.886	18.508	31.41	280.61	-2057.12
7	BEND	3	END-I	-35.553	6.559	-33.922	-94.67	286.78	361.67
			CENTER	-34.838	9.660	-33.922	-86.92	-5.55	297.37
			END-J	-33.854	12.686	-33.922	-90.18	-235.87	208.78
7	BEND	4	END-I	-6938.545	-1329.951	36.825	-1351.50	-203.47	38648.89
			CENTER	-7028.610	-714.707	36.825	-1351.32	207.57	46754.81
			END-J	-7064.230	-93.927	36.825	-1314.99	6.7.01	49960.59
7	BEND	5	END-I	1193.790	196.171	-181.407	871.17	-1424.22	-1577.97
			CENTER	1171.918	-300.378	-181.407	679.33	-2930.87	390.57
			END-J	1140.967	-402.259	-181.407	355.76	-4414.82	3176.13
7	BEND	6	END-I	-1190.289	-123.652	-239.578	1234.00	-1817.05	5541.14
			CENTER	-1196.551	-18.513	-239.578	985.94	-3814.42	6104.74
			END-J	-1193.545	86.769	-239.578	563.21	-5782.24	5834.14
7	BEND	7	END-I	-82.073	-56.266	27.084	196.82	-237.01	148.86
			CENTER	-86.703	-48.831	27.084	184.65	-39.07	565.51
			END-J	-90.660	-41.019	27.084	189.95	159.18	921.72
7	BEND	8	END-I	61.891	27.622	-52.661	-422.34	503.47	-183.52
			CENTER	64.080	22.073	-52.661	-394.79	121.92	-380.53
			END-J	65.773	16.353	-52.661	-400.90	-260.58	-532.87
7	BEND	9	END-I	-37.836	-33.694	9.612	85.70	-79.03	6.00
			CENTER	-40.652	-30.237	9.612	81.77	-10.19	259.45
			END-J	-43.153	-26.545	9.612	83.91	58.73	484.56

PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
8	BEND	1	END-I	-148.314	22.736	65.794	230.18	255.84	1153.41
			CENTER	-147.946	25.023	65.794	234.81	343.67	1120.22
			END-J	-147.542	27.304	65.794	240.79	431.43	1083.87
8	BEND	2	END-I	208.779	14.530	15.388	43.53	503.30	-2014.01
			CENTER	208.979	11.305	15.388	51.46	523.95	-2031.96
			END-J	209.129	8.077	15.388	59.71	544.47	-2045.43
8	BEND	3	END-I	-32.386	19.017	-28.409	-113.23	-246.78	183.40
			CENTER	-32.088	19.515	-28.409	-117.33	-284.48	156.63
			END-J	-31.783	20.008	-28.409	-122.02	-322.10	129.17
8	BEND	4	END-I	-6825.110	641.086	139.483	-806.06	-4821.24	49742.10
			CENTER	-6814.399	746.382	139.483	-878.90	-4614.41	48778.10
			END-J	-6802.064	851.499	139.483	-948.54	-4406.48	47667.91
8	BEND	5	END-I	1047.798	-344.674	-162.543	-94.03	-4754.09	2663.61
			CENTER	1042.351	-360.810	-162.543	-169.16	-4977.93	3153.77
			END-J	1036.657	-376.859	-162.543	-247.74	-5200.58	3666.29
8	BEND	6	END-I	-1143.130	190.564	-126.708	-11.90	-6423.58	5150.36
			CENTER	-1140.052	208.190	-126.708	-112.43	-6598.69	4873.31
			END-J	-1136.702	225.767	-126.708	-215.65	-6772.23	4571.80
8	BEND	7	END-I	-92.003	-29.296	22.094	214.00	34.38	929.52
			CENTER	-92.445	-27.872	22.094	214.74	61.77	969.24
			END-J	-92.864	-26.442	22.094	215.90	89.15	1006.98
8	BEND	8	END-I	65.896	13.142	-47.492	-431.25	-155.55	-549.91
			CENTER	66.091	12.123	-47.492	-434.11	-214.86	-567.46
			END-J	66.270	11.101	-47.492	-437.88	-274.13	-583.60
8	BEND	9	END-I	-44.314	-19.896	6.882	93.96	-4.90	486.25
			CENTER	-44.616	-19.210	6.882	93.95	3.21	513.42
			END-J	-44.907	-18.519	6.882	94.06	11.33	539.63
9	TANGENT	1	END-I	-146.418	56.197	36.207	248.18	910.02	727.43
			END-J	-146.418	56.197	36.207	248.18	1374.18	7.01
9	TANGENT	2	END-I	205.580	4.606	11.622	73.56	-548.51	-2043.90
			END-J	205.580	4.606	11.622	73.56	-399.52	-2102.95
9	TANGENT	3	END-I	-31.198	4.398	-32.035	-128.77	-212.73	271.09
			END-J	-31.198	4.398	-32.035	-128.77	-623.40	214.70
9	TANGENT	4	END-I	-6610.362	892.787	-392.405	-1101.38	19954.05	43510.56
			END-J	-6610.362	892.787	-392.405	-1101.38	14923.55	32065.30
9	TANGENT	5	END-I	1000.432	-282.816	55.687	-359.26	-2676.28	5766.94
			END-J	1000.432	-282.816	55.687	-359.26	-1962.38	9392.55

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PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
9	TANGENT	6	END-I	-1103.532	147.477	-160.841	-360.62	-3587.81	7335.43
			END-J	-1103.532	147.477	-160.841	-360.62	-5649.74	5444.82
9	TANGENT	7	END-I	-91.267	-7.826	27.597	216.36	575.44	831.04
			END-J	-91.267	-7.826	27.597	216.36	929.22	931.36
9	TANGENT	8	END-I	65.792	-14.633	-41.703	-442.65	-520.96	-374.34
			END-J	65.792	-14.633	-41.703	-442.65	-1055.58	-186.75
9	TANGENT	9	END-I	-44.011	-10.022	12.962	93.56	277.15	463.26
			END-J	-44.011	-10.022	12.962	93.56	443.33	591.74
10	TANGENT	1	END-I	-145.135	48.437	23.877	248.17	1374.18	7.26
			END-J	-145.135	48.437	23.877	248.17	1746.94	-748.91
10	TANGENT	2	END-I	198.718	-8.794	11.440	75.66	-399.52	-2102.87
			END-J	198.718	-8.794	11.440	75.66	-220.92	-1965.58
10	TANGENT	3	END-I	-30.866	5.408	-24.901	-128.99	-623.40	214.58
			END-J	-30.866	5.408	-24.901	-128.99	-1012.15	130.14
10	TANGENT	4	END-I	-6295.361	817.187	-399.217	-1133.42	14923.55	32064.19
			END-J	-6295.361	817.187	-399.217	-1133.42	8691.14	19306.62
10	TANGENT	5	END-I	948.287	-74.306	50.789	-368.65	-1962.38	9392.19
			END-J	948.287	-74.306	50.789	-368.65	-1169.49	10552.22
10	TANGENT	6	END-I	-1052.202	136.347	-49.633	-366.07	-5649.74	5444.45
			END-J	-1052.202	136.347	-49.633	-366.07	-6424.59	3315.88
10	TANGENT	7	END-I	-87.267	-2.566	19.173	215.43	929.22	931.58
			END-J	-87.267	-2.566	19.173	215.43	1228.54	971.63
10	TANGENT	8	END-I	64.384	-13.013	-31.722	-442.47	-1055.58	-187.19
			END-J	64.384	-13.013	-31.722	-442.47	-1550.80	15.96
10	TANGENT	9	END-I	-41.665	-5.962	8.981	92.97	443.33	591.83
			END-J	-41.665	-5.962	8.981	92.97	583.53	684.90
11	TANGENT	1	END-I	-143.457	36.437	8.748	248.17	1746.94	-748.91
			END-J	-143.457	36.437	8.748	248.17	1883.52	-1317.75
11	TANGENT	2	END-I	190.951	-23.644	10.545	75.66	-220.92	-1965.58
			END-J	190.951	-23.644	10.545	75.66	-56.31	-1596.45
11	TANGENT	3	END-I	-30.430	5.988	-14.957	-128.99	-1012.15	130.14
			END-J	-30.430	5.988	-14.957	-128.99	-1245.64	36.65
11	TANGENT	4	END-I	-5950.702	711.287	-373.037	-1133.42	8691.14	19306.62
			END-J	-5950.702	711.287	-373.037	-1133.42	2867.45	8202.32

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PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
11	TANGENT	5	END-I	890.857	85.284	43.746	-368.65	-1169.49	10552.22
			END-J	890.857	85.284	43.746	-368.65	-486.54	9220.81
11	TANGENT	6	END-I	-995.993	120.317	41.278	-366.07	-6424.59	3315.88
			END-J	-995.993	120.317	41.278	-366.07	-5780.18	1437.55
11	TANGENT	7	END-I	-82.720	3.554	8.537	215.43	1228.54	971.63
			END-J	-82.720	3.554	8.537	215.43	1361.81	916.15
11	TANGENT	8	END-I	62.717	-10.393	-18.555	-442.47	-1550.80	15.96
			END-J	62.717	-10.393	-18.555	-442.47	-1840.48	178.21
11	TANGENT	9	END-I	-39.012	-.942	3.909	92.97	583.53	684.90
			END-J	-39.012	-.942	3.909	92.97	644.56	699.60
12	TANGENT	1	END-I	-140.890	16.457	-12.091	247.06	1883.52	-1317.96
			END-J	-140.890	16.457	-12.091	247.06	1561.02	-1756.90
12	TANGENT	2	END-I	180.126	-40.544	8.478	74.32	-56.31	-1596.52
			END-J	180.126	-40.544	8.478	74.32	169.83	-515.09
12	TANGENT	3	END-I	-29.710	5.848	.365	-128.96	-1245.64	36.76
			END-J	-29.710	5.848	.365	-128.96	-1235.91	-119.23
12	TANGENT	4	END-I	-5485.314	541.137	-302.203	-1126.54	2867.45	8203.26
			END-J	-5485.314	541.137	-302.203	-1126.54	-5193.15	-6230.41
12	TANGENT	5	END-I	812.862	212.954	32.981	-360.91	-486.54	9221.12
			END-J	812.862	212.954	32.981	-360.91	393.16	3541.04
12	TANGENT	6	END-I	-919.741	93.777	122.299	-364.86	-5780.18	1437.85
			END-J	-919.741	93.777	122.299	-364.86	-2518.11	-1063.44
12	TANGENT	7	END-I	-76.408	11.334	-6.474	216.20	1361.81	915.96
			END-J	-76.408	11.334	-6.474	216.20	1189.13	613.65
12	TANGENT	8	END-I	60.367	-5.893	.925	-442.32	-1840.48	178.58
			END-J	60.367	-5.893	.925	-442.32	-1815.81	335.77
12	TANGENT	9	END-I	-35.357	5.888	-3.282	93.56	644.56	699.53
			END-J	-35.357	5.888	-3.282	93.56	557.01	542.47
13	TANGENT	1	END-I	-137.024	-11.863	-33.525	245.94	1561.02	-1757.06
			END-J	-137.024	-11.863	-33.525	245.94	667.50	-1440.88
13	TANGENT	2	END-I	165.816	-45.634	4.773	73.99	169.83	-515.14
			END-J	165.816	-45.634	4.773	73.99	297.04	701.12
13	TANGENT	3	END-I	-28.482	3.508	19.467	-129.03	-1235.91	-119.15
			END-J	-28.482	3.508	19.467	-129.03	-717.07	-212.66

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PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
13	TANGENT	4	END-I	-4900.426	285.227	-171.815	-1130.53	-5193.15	-6229.68
			END-J	-4900.426	285.227	-171.815	-1130.53	-9772.39	-13831.61
13	TANGENT	5	END-I	714.043	217.804	19.611	-358.64	393.16	3541.27
			END-J	714.043	217.804	19.611	-358.64	915.84	-2263.67
13	TANGENT	6	END-I	-823.491	51.937	143.200	-365.54	-2518.11	-1063.20
			END-J	-823.491	51.937	143.200	-365.54	1298.47	-2447.43
13	TANGENT	7	END-I	-68.162	17.414	-22.557	216.60	1189.13	613.51
			END-J	-68.162	17.414	-22.557	216.60	587.94	149.38
13	TANGENT	8	END-I	57.224	.767	24.151	-442.10	-1815.81	336.05
			END-J	57.224	.767	24.151	-442.10	-1172.13	315.61
13	TANGENT	9	END-I	-30.643	12.378	-11.010	93.91	557.01	542.41
			END-J	-30.643	12.378	-11.010	93.91	263.56	212.50
14	TANGENT	1	END-I	-132.493	-35.753	-43.822	246.57	667.50	-1440.77
			END-J	-132.493	-35.753	-43.822	246.57	-500.32	-487.96
14	TANGENT	2	END-I	150.915	-27.274	.851	73.69	297.04	701.15
			END-J	150.915	-27.274	.851	73.69	319.73	1427.99
14	TANGENT	3	END-I	-26.981	-.432	32.458	-128.94	-717.07	-212.72
			END-J	-26.981	-.432	32.458	-128.94	147.92	-201.22
14	TANGENT	4	END-I	-4317.741	9.617	-36.304	-1124.46	-9772.39	-13832.10
			END-J	-4317.741	9.617	-36.304	-1124.46	-10739.88	-14088.40
14	TANGENT	5	END-I	614.988	125.854	8.067	-357.65	915.84	-2263.83
			END-J	614.988	125.854	8.067	-357.65	1130.81	-5617.77
14	TANGENT	6	END-I	-727.391	5.157	106.184	-364.47	1298.47	-2447.59
			END-J	-727.391	5.157	106.184	-364.47	4128.22	-2585.01
14	TANGENT	7	END-I	-59.622	17.404	-30.988	216.53	587.94	149.48
			END-J	-59.622	17.404	-30.988	216.53	-237.87	-314.33
14	TANGENT	8	END-I	53.860	6.767	39.717	-442.24	-1172.13	315.42
			END-J	53.860	6.767	39.717	-442.24	-113.69	135.08
14	TANGENT	9	END-I	-25.811	14.458	-15.011	93.81	263.56	212.54
			END-J	-25.811	14.458	-15.011	93.81	-136.47	-172.76
15	TANGENT	1	END-I	-127.344	-35.251	-39.633	246.62	-500.32	-487.94
			END-J	-127.344	-35.251	-39.633	246.62	-1556.99	451.90
15	TANGENT	2	END-I	135.478	-20.254	-2.574	73.54	319.73	1428.00
			END-J	135.478	-20.254	-2.574	73.54	251.10	1968.01

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PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
15	TANGENT	3	END-I	-25.185	-2.028	34.473	-128.92	147.92	-201.23
			END-J	-25.185	-2.028	34.473	-128.92	1067.00	-147.15
15	TANGENT	4	END-I	-3737.050	231.393	78.985	-1123.04	-10739.88	-14088.51
			END-J	-3737.050	231.393	78.985	-1123.04	-8634.05	-20257.72
15	TANGENT	5	END-I	515.830	78.438	-1.548	-357.08	1130.81	-5617.80
			END-J	515.830	78.438	-1.548	-357.08	1089.54	-7709.04
15	TANGENT	6	END-I	-631.209	35.394	40.951	-364.21	4128.22	-2585.05
			END-J	-631.209	35.394	40.951	-364.21	5220.02	-3528.69
15	TANGENT	7	END-I	-50.846	22.041	-29.086	216.56	-237.87	-314.31
			END-J	-50.846	22.041	-29.086	216.56	-1013.33	-901.94
15	TANGENT	8	END-I	50.308	4.375	42.942	-442.25	-113.69	135.04
			END-J	50.308	4.375	42.942	-442.25	1031.18	18.40
15	TANGENT	9	END-I	-20.893	17.519	-13.940	93.83	-136.47	-172.75
			END-J	-20.893	17.519	-13.940	93.83	-508.12	-639.84
16	TANGENT	1	END-I	-121.600	-35.221	-22.166	246.86	-1556.99	451.77
			END-J	-121.600	-35.221	-22.166	246.86	-2147.76	1390.49
16	TANGENT	2	END-I	119.552	14.306	-4.715	74.60	251.10	1967.97
			END-J	119.552	14.306	-4.715	74.60	125.43	1586.69
16	TANGENT	3	END-I	-23.082	-5.618	23.474	-129.00	1067.00	-147.08
			END-J	-23.082	-5.618	23.474	-129.00	1692.64	2.66
16	TANGENT	4	END-I	-3158.118	-54.457	149.982	-1133.97	-8634.05	-20257.11
			END-J	-3158.118	-54.457	149.982	-1133.97	-4636.69	-18805.72
16	TANGENT	5	END-I	416.731	-42.562	-8.509	-361.24	1089.54	-7708.84
			END-J	416.731	-42.562	-8.509	-361.24	862.76	-6574.46
16	TANGENT	6	END-I	-535.033	-14.636	-25.181	-366.11	5220.02	-3528.50
			END-J	-535.033	-14.636	-25.181	-366.11	4548.89	-3138.42
16	TANGENT	7	END-I	-41.870	9.331	-17.373	216.08	-1013.33	-902.06
			END-J	-41.870	9.331	-17.373	216.08	-1476.35	-1150.74
16	TANGENT	8	END-I	46.592	5.985	32.417	-442.24	1031.18	18.63
			END-J	46.592	5.985	32.417	-442.24	1895.16	-140.88
16	TANGENT	9	END-I	-15.919	8.939	-8.049	93.49	-508.12	-639.89
			END-J	-15.919	8.939	-8.049	93.49	-722.65	-878.15
17	TANGENT	1	END-I	-115.246	-23.231	2.939	246.25	-2147.76	1390.60
			END-J	-115.246	-23.231	2.939	246.25	-2069.45	2009.70

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PIPE FORCES AND MOMENTS

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ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
17	TANGENT	2	END-I	103.209	36.816	-4.917	73.91	125.43	1586.73
			END-J	103.205	36.816	-4.917	73.91	-5.60	605.61
17	TANGENT	3	END-I	-20.708	-6.978	1.671	-129.00	1692.64	2.60
			END-J	-20.708	-6.978	1.671	-129.00	1737.18	188.57
17	TANGENT	4	END-I	-2581.146	-327.407	159.601	-1125.72	-4636.69	-18806.21
			END-J	-2581.146	-327.407	159.601	-1125.72	-383.42	-10081.00
17	TANGENT	5	END-I	317.898	-122.782	-11.838	-358.36	862.76	-6574.62
			END-J	317.898	-122.782	-11.838	-358.36	547.29	-3302.54
17	TANGENT	6	END-I	-438.904	-61.796	-71.922	-364.73	4548.89	-3138.58
			END-J	-438.904	-61.796	-71.922	-364.73	2632.21	-1491.75
17	TANGENT	7	END-I	-32.719	-6.119	.451	216.58	-1476.35	-1150.64
			END-J	-32.719	-6.119	.451	216.58	-1464.33	-987.57
17	TANGENT	8	END-I	42.670	5.455	10.638	-442.18	1895.16	-141.07
			END-J	42.670	5.455	10.638	-442.18	2178.65	-286.45
17	TANGENT	9	END-I	-10.901	-2.561	.824	93.87	-722.65	-878.10
			END-J	-10.901	-2.561	.824	93.87	-700.68	-809.87
18	TANGENT	1	END-I	-110.412	-10.191	20.354	247.62	-2069.45	2009.53
			END-J	-110.412	-10.191	20.354	247.62	-1854.85	2116.98
18	TANGENT	2	END-I	91.540	43.566	-3.859	74.32	-5.60	605.56
			END-J	91.540	43.566	-3.859	74.32	-46.29	146.24
18	TANGENT	3	END-I	-18.858	-5.848	-16.191	-128.87	1737.18	188.66
			END-J	-18.858	-5.848	-16.191	-128.87	1566.48	250.32
18	TANGENT	4	END-I	-2179.510	-488.497	129.090	-1132.59	-383.42	-10080.23
			END-J	-2179.510	-488.497	129.090	-1132.59	977.60	-4929.90
18	TANGENT	5	END-I	249.202	-140.172	-12.373	-360.60	547.29	-3302.29
			END-J	249.202	-140.172	-12.373	-360.60	416.85	-1824.43
18	TANGENT	6	END-I	-371.918	-88.786	-81.648	-365.75	2632.21	-1491.50
			END-J	-371.918	-88.786	-81.648	-365.75	1771.38	-555.41
18	TANGENT	7	END-I	-26.246	-15.949	13.325	215.91	-1464.33	-987.71
			END-J	-26.246	-15.949	13.325	215.91	-1323.84	-819.56
18	TANGENT	8	END-I	39.824	4.335	-8.561	-442.38	2178.65	-286.14
			END-J	39.824	4.335	-8.561	-442.38	2088.39	-331.85
18	TANGENT	9	END-I	-7.382	-10.341	7.172	93.32	-700.68	-809.93
			END-J	-7.382	-10.341	7.172	93.32	-625.07	-700.91

PIPE FORCES AND MOMENTS

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ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
19	TANGENT	1	END-I	-108.467	-4.561	26.276	234.68	-1854.85	2118.45
			END-J	-108.467	-4.561	26.276	234.68	-1719.76	2141.90
19	TANGENT	2	END-I	86.602	45.136	-2.656	73.43	-46.29	146.69
			END-J	86.602	45.136	-2.656	73.43	-59.95	-85.36
19	TANGENT	3	END-I	-17.904	-5.058	-23.447	-130.40	1566.48	249.53
			END-J	-17.904	-5.058	-23.447	-130.40	1445.93	275.53
19	TANGENT	4	END-I	-2010.988	-548.807	97.426	-1102.44	977.60	-4936.73
			END-J	-2010.988	-548.807	97.426	-1102.44	1478.50	-2115.17
19	TANGENT	5	END-I	220.366	-141.312	-10.858	-349.45	416.85	-1826.59
			END-J	220.366	-141.312	-10.858	-349.45	361.02	-1100.07
19	TANGENT	6	END-I	-343.148	-98.706	-83.849	-362.35	1771.38	-557.64
			END-J	-343.148	-98.706	-83.849	-362.35	1340.29	-50.16
19	TANGENT	7	END-I	-23.620	-19.609	18.183	220.91	-1323.84	-818.22
			END-J	-23.620	-19.609	18.183	220.91	-1230.36	-717.40
19	TANGENT	8	END-I	38.704	3.865	-16.490	-440.34	2088.39	-334.55
			END-J	38.704	3.865	-16.490	-440.34	2003.61	-354.42
19	TANGENT	9	END-I	-5.960	-13.301	9.585	97.60	-625.07	-700.32
			END-J	-5.960	-13.301	9.585	97.60	-575.79	-631.94
20	TANGENT	1	END-I	-106.975	-1.081	30.734	247.48	-1719.76	2140.46
			END-J	-106.975	-1.081	30.734	247.48	-1574.02	2145.59
20	TANGENT	2	END-I	83.452	45.776	-2.693	72.91	-59.95	-85.80
			END-J	83.452	45.776	-2.693	72.91	-72.72	-302.86
20	TANGENT	3	END-I	-17.518	-4.468	-27.592	-128.75	1445.93	276.31
			END-J	-17.518	-4.468	-27.592	-128.75	1315.09	297.50
20	TANGENT	4	END-I	-1903.850	-584.087	95.561	-1115.07	1478.50	-2108.54
			END-J	-1903.850	-584.087	95.561	-1115.07	1931.63	661.10
20	TANGENT	5	END-I	202.105	-140.272	-11.977	-356.02	361.02	-1097.96
			END-J	202.105	-140.272	-11.977	-356.02	304.23	-432.81
20	TANGENT	6	END-I	-325.834	-104.456	-80.593	-362.64	1340.29	-48.00
			END-J	-325.834	-104.456	-80.593	-362.64	958.13	447.32
20	TANGENT	7	END-I	-21.784	-21.729	21.266	216.62	-1230.36	-718.71
			END-J	-21.784	-21.729	21.266	216.62	-1129.52	-615.67
20	TANGENT	8	END-I	37.838	3.595	-21.767	-442.45	2003.61	-351.78
			END-J	37.838	3.595	-21.767	-442.45	1900.40	-368.83

PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
20	TANGENT	9	END-I	-4.966	-15.041	11.055	93.82	-575.79	-632.52
			END-J	-4.966	-15.041	11.055	93.82	-523.37	-561.20
21	BEND	1	END-I	-105.722	1.949	33.988	249.46	-1574.02	2145.36
			CENTER	-105.649	4.379	33.988	214.02	-1509.02	2138.81
			END-J	-105.521	6.806	33.988	180.08	-1443.22	2127.24
21	BEND	2	END-I	80.625	46.086	-2.289	72.63	-72.72	-302.93
			CENTER	81.664	44.220	-2.289	70.89	-79.10	-396.36
			END-J	82.659	42.331	-2.289	69.00	-85.45	-485.91
21	BEND	3	END-I	-17.069	-3.878	-31.145	-128.47	1315.09	297.62
			CENTER	-17.153	-3.485	-31.145	-98.95	1253.26	305.24
			END-J	-17.229	-3.090	-31.145	-70.85	1190.76	312.04
21	BEND	4	END-I	-1808.094	-613.347	83.561	-1114.45	1931.63	662.13
			CENTER	-1821.717	-571.617	83.561	-1067.76	2129.63	1888.18
			END-J	-1834.377	-529.586	83.561	-1016.54	2326.51	3027.56
21	BEND	5	END-I	185.759	-137.992	-11.904	-356.42	304.23	-432.48
			CENTER	182.538	-142.226	-11.904	-349.61	287.71	-142.55
			END-J	179.220	-146.385	-11.904	-343.19	271.04	156.07
21	BEND	6	END-I	-309.908	-109.176	-78.186	-362.23	958.13	447.65
			CENTER	-312.336	-102.022	-78.186	-341.97	804.43	666.17
			END-J	-314.599	-94.815	-78.186	-325.24	650.31	869.83
21	BEND	7	END-I	-20.205	-23.469	23.758	216.05	-1129.52	-615.87
			CENTER	-20.739	-22.999	23.758	190.59	-1085.03	-567.80
			END-J	-21.263	-22.516	23.758	166.16	-1039.97	-520.70
21	BEND	8	END-I	37.115	3.385	-26.289	-442.79	1900.40	-368.42
			CENTER	37.183	2.531	-26.289	-399.61	1855.68	-374.54
			END-J	37.231	1.675	-26.289	-357.47	1809.98	-378.89
21	BEND	9	END-I	-4.112	-16.471	12.260	93.30	-523.37	-561.28
			CENTER	-4.490	-16.372	12.260	81.54	-500.01	-527.30
			END-J	-4.865	-16.264	12.260	70.31	-476.38	-493.53
22	BEND	1	END-I	-103.434	15.040	37.003	135.31	-1364.20	2182.00
			CENTER	-102.792	18.932	37.003	86.11	-1242.67	2124.29
			END-J	-102.005	22.798	37.003	41.53	-1119.37	2053.41
22	BEND	2	END-I	80.494	39.977	-3.259	65.98	-106.47	-482.17
			CENTER	81.945	36.911	-3.259	61.71	-119.95	-612.77
			END-J	83.280	33.793	-3.259	56.93	-133.27	-732.87
22	BEND	3	END-I	-16.686	-3.188	-35.067	-32.81	1203.66	265.34
			CENTER	-16.794	-2.557	-35.067	10.39	1084.95	275.10
			END-J	-16.878	-1.921	-35.067	49.07	964.70	282.71

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PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
891-V	BEND	4	END-I	-1735.515	-510.320	86.319	-940.43	2473.87	2933.88
			CENTER	-1753.535	-444.469	86.319	-840.88	2800.73	4555.71
			END-J	-1769.058	-377.985	86.319	-729.07	3123.61	5952.75
	BEND	5	END-I	154.741	-146.657	-5.889	-334.32	287.69	145.15
			CENTER	149.097	-152.391	-5.889	-323.60	280.10	653.12
			END-J	143.241	-157.909	-5.889	-313.18	272.11	1180.20
	BEND	6	END-I	-298.273	-94.423	-70.712	-303.93	693.72	843.60
			CENTER	-301.623	-83.101	-70.712	-282.07	464.55	1145.15
			END-J	-304.544	-71.660	-70.712	-268.88	234.73	1408.03
	BEND	7	END-I	-20.192	-22.857	27.500	132.75	-1064.22	-479.66
			CENTER	-21.040	-22.079	27.500	94.26	-975.08	-403.33
			END-J	-21.858	-21.270	27.500	59.16	-884.55	-329.70
	BEND	8	END-I	36.357	- .895	-31.669	-299.99	1804.28	-449.39
			CENTER	36.297	-2.266	-31.669	-233.73	1706.77	-444.02
			END-J	36.186	-3.634	-31.669	-171.19	1606.82	-434.00
	BEND	9	END-I	-4.465	-17.242	14.307	54.87	-497.25	-474.54
			CENTER	-5.113	-17.062	14.307	36.98	-450.38	-416.27
			END-J	-5.753	-16.857	14.307	20.88	-402.87	-358.66
	BEND	1	END-I	-99.053	1.970	49.241	7.34	-2080.04	1069.65
			CENTER	-99.038	2.649	49.241	-6.82	-2049.65	1068.42
			END-J	-99.017	3.328	49.241	-20.77	-2019.17	1066.58
BEND	2	END-I	82.106	27.128	14.424	46.26	299.61	-682.74	
		CENTER	82.290	26.564	14.424	48.35	308.19	-699.35	
		END-J	82.470	25.999	14.424	50.49	316.76	-715.57	
BEND	3	END-I	-16.657	20.331	-31.352	92.20	637.27	773.54	
		CENTER	-16.517	20.445	-31.352	96.50	617.28	760.96	
		END-J	-16.376	20.557	-31.352	100.66	597.25	748.31	
BEND	4	END-I	-1702.916	-328.306	-120.963	-554.88	-737.59	6698.64	
		CENTER	-1705.127	-316.621	-120.963	-560.18	-808.42	6897.65	
		END-J	-1707.258	-304.922	-120.963	-565.96	-879.21	7089.44	
BEND	5	END-I	122.559	-125.918	-93.392	-293.34	-427.95	1138.34	
		CENTER	121.693	-126.756	-93.392	-296.47	-483.56	1216.31	
		END-J	120.821	-127.587	-93.392	-299.97	-539.15	1294.79	
BEND	6	END-I	-294.283	-16.958	-89.679	-249.15	-588.21	1304.56	
		CENTER	-294.392	-14.940	-89.679	-253.37	-641.83	1314.40	
		END-J	-294.487	-12.921	-89.679	-257.96	-695.42	1323.00	
BEND	7	END-I	-21.412	-34.445	12.168	19.05	-548.04	-770.66	
		CENTER	-21.648	-34.297	12.168	15.32	-540.65	-749.45	
		END-J	-21.882	-34.148	12.168	11.63	-533.23	-728.33	

PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
23	BEND	8	END-I	35.073	15.587	-32.380	-105.18	1577.66	547.23
			CENTER	35.179	15.346	-32.380	-94.43	1558.36	537.69
			END-J	35.284	15.105	-32.380	-83.81	1538.99	528.29
23	BEND	9	END-I	-5.836	-23.163	2.650	1.22	-132.31	-523.32
			CENTER	-5.995	-23.122	2.650	.32	-130.68	-509.04
			END-J	-6.153	-23.081	2.650	-.57	-129.05	-494.78
24	BEND	1	END-I	-96.786	36.449	38.824	-38.27	-961.80	2070.88
			CENTER	-95.732	39.134	38.824	-63.73	-862.89	1975.98
			END-J	-94.603	41.789	38.824	-86.41	-763.31	1874.38
24	BEND	2	END-I	81.187	27.762	-4.081	44.08	-181.82	-761.52
			CENTER	81.930	25.487	-4.081	38.85	-193.22	-828.38
			END-J	82.609	23.191	-4.081	33.30	-204.47	-889.50
24	BEND	3	END-I	-16.104	-1.989	-39.152	123.56	925.57	234.21
			CENTER	-16.153	-1.539	-39.152	147.95	823.47	238.64
			END-J	-16.189	-1.088	-39.152	169.50	720.73	241.94
24	BEND	4	END-I	-1652.723	-306.376	83.672	-462.92	3601.19	6178.24
			CENTER	-1660.626	-260.154	83.672	-359.35	3822.76	6889.53
			END-J	-1667.237	-213.729	83.672	-249.65	4041.36	7484.50
24	BEND	5	END-I	106.495	-154.745	2.334	-287.72	361.07	1357.94
			CENTER	102.137	-157.656	2.334	-277.45	374.81	1750.17
			END-J	97.699	-160.444	2.334	-266.81	388.27	2149.55
24	BEND	6	END-I	-285.765	-62.079	-59.246	-247.97	252.72	1474.83
			CENTER	-287.385	-54.084	-59.246	-242.90	110.80	1620.68
			END-J	-288.782	-46.046	-59.246	-241.79	-31.21	1746.39
24	BEND	7	END-I	-21.420	-20.278	31.776	-9.84	-865.23	-257.35
			CENTER	-21.978	-19.673	31.776	-32.86	-784.84	-207.19
			END-J	-22.518	-19.052	31.776	-53.63	-703.84	-158.57
24	BEND	8	END-I	34.457	-8.611	-37.779	-48.06	1546.60	-510.21
			CENTER	34.204	-9.569	-37.779	-6.22	1452.49	-487.39
			END-J	33.924	-10.519	-37.779	32.97	1357.25	-462.17
24	BEND	9	END-I	-6.127	-17.413	16.770	-11.08	-401.94	-315.89
			CENTER	-6.511	-17.235	16.770	-21.70	-359.37	-272.38
			END-J	-7.089	-17.044	16.770	-31.13	-316.53	-229.34
25	BEND	1	END-I	-90.023	44.256	44.509	-125.89	-917.88	1801.40
			CENTER	-87.565	48.940	44.509	-168.54	-698.79	1580.15
			END-J	-84.863	53.489	44.509	-199.57	-477.75	1336.99
25	BEND	2	END-I	78.895	21.398	-.720	32.70	-128.42	-903.64
			CENTER	79.914	17.209	-.720	25.80	-133.39	-995.29
			END-J	80.710	12.972	-.720	18.64	-137.98	-1066.94

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PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
25	BEND	3	END-I	-14.851	3.599	-42.268	192.24	691.01	303.75
			CENTER	-14.641	4.377	-42.268	223.12	479.36	284.81
			END-J	-14.390	5.143	-42.268	242.79	266.38	262.21
25	BEND	4	END-I	-1538.408	-240.434	29.727	-165.45	3390.42	7803.23
			CENTER	-1548.945	-158.996	29.727	17.24	3535.47	8751.47
			END-J	-1555.173	-77.116	29.727	207.33	3670.69	9312.01
25	BEND	5	END-I	69.303	-145.421	-10.120	-268.86	211.38	2173.83
			CENTER	61.540	-148.872	-10.120	-258.61	177.24	2872.48
			END-J	53.606	-151.909	-10.120	-250.17	142.61	3586.54
25	BEND	6	END-I	-266.779	-43.349	-55.595	-255.27	-172.56	1736.20
			CENTER	-268.694	-29.224	-55.595	-270.97	-422.65	1908.49
			END-J	-269.861	-15.018	-55.595	-299.84	-671.55	2013.52
25	BEND	7	END-I	-21.611	-23.259	32.296	-76.47	-685.36	-218.74
			CENTER	-22.807	-22.087	32.296	-108.45	-527.14	-111.09
			END-J	-23.940	-20.854	32.296	-132.05	-367.46	-9.15
25	BEND	8	END-I	32.566	-8.090	-44.200	82.59	1389.95	-343.58
			CENTER	32.095	-9.796	-44.200	150.22	1173.94	-301.12
			END-J	31.533	-11.474	-44.200	206.37	954.68	-250.63
25	BEND	9	END-I	-7.045	-19.899	16.320	-40.26	-294.41	-255.85
			CENTER	-8.084	-19.500	16.320	-53.68	-214.45	-162.31
			END-J	-9.101	-19.047	16.320	-62.87	-133.88	-70.80
26	BEND	1	END-I	-76.689	54.626	52.626	-210.50	-602.47	1283.87
			CENTER	-75.138	56.740	52.626	-225.36	-464.47	1144.27
			END-J	-73.529	58.811	52.626	-236.37	-326.10	999.43
26	BEND	2	END-I	77.041	8.780	.048	-7.12	-25.29	-1075.66
			CENTER	77.256	6.631	.048	-7.82	-24.96	-1094.98
			END-J	77.410	4.477	.048	-8.51	-24.61	-1108.90
26	BEND	3	END-I	-13.463	11.061	-41.971	264.12	220.80	283.11
			CENTER	-13.149	11.432	-41.971	268.70	108.16	254.91
			END-J	-12.826	11.794	-41.971	270.14	-4.57	225.80
26	BEND	4	END-I	-1435.236	-64.093	16.773	596.57	2644.00	9637.62
			CENTER	-1436.464	-24.096	16.773	670.57	2668.40	9748.17
			END-J	-1436.578	15.919	16.773	745.21	2690.73	9758.42
25	BEND	5	END-I	24.058	-130.088	-23.293	-184.68	-221.52	3586.50
			CENTER	20.426	-130.708	-23.293	-191.59	-274.67	3913.41
			END-J	16.778	-131.226	-23.293	-199.98	-327.62	4241.75
26	BEND	6	END-I	-250.247	-6.941	-42.022	-313.08	-859.80	1938.52
			CENTER	-250.343	.031	-42.022	-338.37	-956.08	1947.18
			END-J	-250.245	7.003	-42.022	-366.33	-1051.61	1938.37

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PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
26	BEND	7	END-I	-23.326	-24.543	31.330	-156.51	-355.06	-44.54
			CENTER	-24.000	-23.884	31.330	-165.24	-272.03	16.17
			END-J	-24.656	-23.207	31.330	-171.66	-188.79	75.20
26	BEND	8	END-I	28.782	-7.516	-49.966	266.01	960.37	-154.05
			CENTER	28.561	-8.315	-49.966	290.91	827.35	-134.20
			END-J	28.319	-9.107	-49.966	312.09	693.69	-112.36
26	BEND	9	END-I	-9.595	-21.317	14.745	-72.79	-121.27	-82.98
			CENTER	-10.184	-21.041	14.745	-75.62	-82.24	-29.88
			END-J	-10.767	-20.749	14.745	-77.37	-43.14	22.50
27	BEND	1	END-I	-67.363	68.230	42.613	-243.58	-160.57	1037.28
			CENTER	-63.157	72.141	42.613	-245.88	83.93	658.73
			END-J	-58.724	75.793	42.613	-233.53	328.13	259.78
27	BEND	2	END-I	72.896	3.559	.566	-12.82	-194.70	-1091.91
			CENTER	72.978	-.812	.566	-24.36	-190.54	-1099.32
			END-J	72.799	-5.180	.566	-35.64	-185.69	-1083.16
27	BEND	3	END-I	-11.217	5.895	-42.767	270.57	21.50	224.30
			CENTER	-10.844	6.556	-42.767	264.46	-225.19	190.73
			END-J	-10.432	7.193	-42.767	243.60	-471.08	153.65
27	BEND	4	END-I	-1312.025	-38.317	-15.026	862.55	4135.07	9229.27
			CENTER	-1311.965	40.309	-15.026	1106.16	3995.04	9223.90
			END-J	-1307.198	118.790	-15.026	1340.96	3840.66	8794.84
27	BEND	5	END-I	-5.934	-106.070	-2.680	-196.96	335.78	4241.25
			CENTER	-12.275	-105.524	-2.680	-176.94	332.52	4811.88
			END-J	-18.571	-104.600	-2.680	-157.14	328.08	5378.54
27	BEND	6	END-I	-228.795	-7.350	-30.015	-393.88	-728.34	2076.47
			CENTER	-228.825	6.362	-30.015	-441.63	-865.20	2079.13
			END-J	-228.033	20.052	-30.015	-497.48	-998.95	2007.90
27	BEND	7	END-I	-23.870	-19.046	34.924	-177.42	-169.32	103.05
			CENTER	-24.968	-17.583	34.924	-181.60	29.81	201.83
			END-J	-25.976	-16.056	34.924	-173.85	228.83	292.55
27	BEND	8	END-I	26.625	-16.611	-51.475	333.93	657.67	-217.24
			CENTER	25.587	-18.176	-51.475	364.40	359.11	-123.42
			END-J	24.453	-19.675	-51.475	376.93	59.26	-21.35
27	BEND	9	END-I	-10.931	-18.895	17.854	-78.65	-36.64	28.73
			CENTER	-12.043	-18.207	17.854	-77.82	64.35	128.79
			END-J	-13.111	-17.453	17.854	-70.94	165.10	224.96
28	BEND	1	END-I	-49.673	86.063	15.461	-208.30	406.69	144.61
			CENTER	-48.695	86.619	15.461	-203.59	424.77	56.64
			END-J	-47.712	87.165	15.461	-198.68	442.80	-31.88

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PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
28	BEND	2	END-I	68.639	-8.321	4.893	-37.35	-490.77	-983.23
			CENTER	68.541	-9.097	4.893	-42.87	-485.33	-974.36
			END-J	68.433	-9.872	4.893	-46.33	-479.83	-964.70
28	BEND	3	END-I	-8.156	-4.054	-40.238	200.98	-422.92	292.59
			CENTER	-8.201	-3.961	-40.238	195.95	-466.16	296.68
			END-J	-8.245	-3.868	-40.238	190.43	-509.35	300.67
28	BEND	4	END-I	-1209.276	148.200	-88.615	1547.94	6127.74	7345.25
			CENTER	-1207.861	131.881	-88.615	1616.70	6019.55	7217.86
			END-J	-1206.291	145.545	-88.615	1684.22	5910.58	7076.53
28	BEND	5	END-I	-37.290	-75.340	19.904	-197.57	1896.49	5042.35
			CENTER	-38.140	-74.913	19.904	-175.97	1918.88	5118.89
			END-J	-38.986	-74.477	19.904	-154.13	1941.03	5194.99
28	BEND	6	END-I	-210.722	17.861	-27.800	-605.64	-327.21	2191.62
			CENTER	-210.507	20.245	-27.800	-609.46	-348.65	2172.21
			END-J	-210.264	22.627	-27.800	-613.53	-370.05	2150.37
28	BEND	7	END-I	-26.723	-4.360	36.273	-157.64	317.00	206.96
			CENTER	-26.771	-4.057	36.273	-153.83	355.72	211.24
			END-J	-26.815	-3.754	36.273	-149.58	394.39	215.22
28	BEND	8	END-I	22.614	-34.539	-43.756	380.83	21.22	-23.72
			CENTER	22.221	-34.792	-43.756	380.80	-27.67	11.60
			END-J	21.826	-35.042	-43.756	380.21	-76.55	47.17
28	BEND	9	END-I	-14.473	-10.896	21.069	-59.62	228.58	164.60
			CENTER	-14.596	-10.731	21.069	-56.91	250.71	175.62
			END-J	-14.716	-10.566	21.069	-53.94	272.80	186.47
29	BEND	1	END-I	-46.407	70.917	51.244	-197.35	412.68	165.26
			CENTER	-45.593	71.443	51.244	-192.32	467.62	92.04
			END-J	-44.774	71.959	51.244	-186.66	522.50	18.28
29	BEND	2	END-I	67.340	-10.467	-.001	-55.45	-12.27	-1077.02
			CENTER	67.216	-11.236	-.001	-55.59	-11.64	-1065.86
			END-J	67.083	-12.003	-.001	-55.72	-11.00	-1053.91
29	BEND	3	END-I	-8.121	13.772	-36.691	190.40	-589.54	47.85
			CENTER	-7.963	13.864	-36.691	183.41	-629.42	33.63
			END-J	-7.804	13.954	-36.691	176.02	-669.21	19.32
29	BEND	4	END-I	-1180.533	143.089	-18.907	1744.54	2241.86	8931.94
			CENTER	-1178.820	156.573	-18.907	1769.94	2202.33	8777.81
			END-J	-1176.953	170.036	-18.907	1794.88	2162.51	8609.82
29	BEND	5	END-I	-42.125	-67.878	-12.953	-117.97	-512.54	5522.92
			CENTER	-42.898	-67.393	-12.953	-123.90	-524.48	5592.50
			END-J	-43.666	-66.898	-12.953	-129.96	-536.36	5661.57

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PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
29	BEND	6	END-I	-205.797	27.626	-10.902	-602.55	-1268.44	1779.17
			CENTER	-205.468	29.976	-10.902	-617.07	-1272.69	1749.54
			END-J	-205.112	32.323	-10.902	-631.64	-1276.76	1717.50
29	BEND	7	END-I	-26.328	-19.342	30.697	-147.01	261.55	366.36
			CENTER	-26.547	-19.040	30.697	-143.83	294.79	386.10
			END-J	-26.763	-18.735	30.697	-140.27	327.99	405.53
29	BEND	8	END-I	21.231	-12.025	-54.811	380.21	-89.67	6.65
			CENTER	21.092	-12.267	-54.811	378.83	-150.40	19.15
			END-J	20.951	-12.507	-54.811	376.77	-211.10	31.89
29	BEND	9	END-I	-14.542	-18.687	14.194	-51.95	164.53	286.94
			CENTER	-14.754	-18.520	14.194	-49.99	179.71	306.07
			END-J	-14.965	-18.350	14.194	-47.85	194.87	325.04
30	BEND	1	END-I	-37.225	72.027	34.369	-175.40	523.50	-57.98
			CENTER	-26.864	76.498	34.369	-71.06	972.25	-990.47
			END-J	-15.983	79.487	34.369	94.58	1402.17	-1969.79
30	BEND	2	END-I	59.805	-8.826	3.347	-59.58	-163.16	-1041.04
			CENTER	58.000	-17.044	3.347	-78.74	-111.50	-878.62
			END-J	55.072	-24.932	3.347	-90.54	-57.66	-615.08
30	BEND	3	END-I	-5.274	7.845	-29.296	161.76	-662.91	116.56
			CENTER	-4.134	8.501	-29.296	42.62	-1045.02	13.94
			END-J	-2.914	8.993	-29.296	-128.43	-1406.89	-95.90
30	BEND	4	END-I	-1010.808	.319	-83.197	1870.36	3354.17	8202.34
			CENTER	-1000.973	140.659	-83.197	2245.42	2022.38	7317.24
			END-J	-971.749	278.274	-83.197	2431.94	651.42	4687.05
30	BEND	5	END-I	-62.659	-14.333	-2.279	-121.81	296.91	5679.34
			CENTER	-64.042	-5.494	-2.279	-81.39	282.47	5803.82
			END-J	-64.184	3.451	-2.279	-43.37	262.55	5816.65
30	BEND	6	END-I	-175.692	4.659	8.446	-652.80	-999.04	1885.38
			CENTER	-173.343	29.007	8.446	-777.82	-793.19	1674.01
			END-J	-167.637	52.794	8.446	-873.06	-571.98	1160.44
30	BEND	7	END-I	-25.156	-15.106	29.395	-131.84	386.52	353.46
			CENTER	-27.010	-11.467	29.395	-51.28	768.39	520.29
			END-J	-28.340	-7.605	29.395	81.53	1135.38	640.03
30	BEND	8	END-I	19.114	-17.302	-52.100	372.29	-212.29	62.19
			CENTER	16.527	-19.788	-52.100	293.79	-912.96	295.05
			END-J	13.619	-21.891	-52.100	118.77	-1595.94	556.73
30	BEND	9	END-I	-14.719	-15.908	14.582	-42.55	241.12	293.19
			CENTER	-16.786	-13.710	14.582	4.05	426.91	479.14
			END-J	-18.527	-11.247	14.582	75.99	604.42	635.83

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PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
31	BEND	1	END-I	-3.016	55.883	12.834	355.66	1295.76	
			CENTER	1.162	55.952	12.834	454.58	1351.79	-2012.36
			END-J	5.334	55.710	12.834	557.41	1400.29	-2388.42
31	BEND	2	END-I	43.625	-23.773	5.524	-95.10	-61.47	-614.02
			CENTER	41.730	-26.962	5.524	-98.03	-17.10	-443.42
			END-J	39.601	-30.001	5.524	-97.65	27.35	-251.87
31	BEND	3	END-I	.689	4.602	.153	-375.56	-1364.27	-52.37
			CENTER	1.030	4.538	.153	-476.28	-1331.42	-83.11
			END-J	1.366	4.448	.153	-574.26	-1291.14	-113.32
31	BEND	4	END-I	-789.630	187.391	-120.497	2476.57	368.20	4694.48
			CENTER	-773.445	245.791	-120.497	2466.90	-626.87	3237.86
			END-J	-752.948	302.820	-120.497	2383.01	-1618.44	1393.10
31	BEND	5	END-I	-57.145	73.767	-3.625	-36.19	462.69	5804.21
			CENTER	-51.481	77.826	-3.625	-2.48	439.75	5294.46
			END-J	-45.530	81.450	-3.625	29.43	414.36	4758.88
31	BEND	6	END-I	-133.503	40.545	34.359	-968.74	-368.58	1166.92
			CENTER	-130.105	50.394	34.359	-984.92	-64.52	861.13
			END-J	-125.982	59.962	34.359	-978.37	239.91	490.05
31	BEND	7	END-I	-26.582	-1.364	14.282	277.44	1123.94	604.28
			CENTER	-26.610	.623	14.282	364.12	1196.02	606.78
			END-J	-26.489	2.607	14.282	455.93	1261.43	595.92
31	BEND	8	END-I	11.126	-16.899	-34.471	-170.37	-1571.96	609.09
			CENTER	9.834	-17.682	-34.471	-295.85	-1786.36	725.38
			END-J	8.487	-18.367	-34.471	-436.97	-1990.81	846.60
31	BEND	9	END-I	-18.373	-4.528	6.557	177.73	602.54	617.04
			CENTER	-18.660	-3.144	6.557	223.84	631.63	642.84
			END-J	-18.842	-1.743	6.557	272.00	657.20	659.28
32	TANGENT	1	END-I	8.420	-24.070	41.089	693.49	2964.37	801.37
			END-J	8.420	-24.070	41.089	693.49	3116.42	890.44
32	TANGENT	2	END-I	35.031	-12.832	-27.075	-94.50	254.33	-10.46
			END-J	35.031	-12.832	-27.075	-94.50	154.15	37.03
32	TANGENT	3	END-I	.703	14.379	4.724	-700.03	-116.70	-1227.19
			END-J	.703	14.379	4.724	-700.03	-99.23	-1280.40
32	TANGENT	4	END-I	-694.874	208.132	248.435	2210.27	-1711.46	-1557.06
			END-J	-694.874	208.132	248.435	2210.27	-792.15	-2327.23
32	TANGENT	5	END-I	-29.531	21.253	100.641	71.62	-4600.12	1285.80
			END-J	-29.531	21.253	100.641	71.62	-4227.71	1207.15

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PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
32	TANGENT	6	END-I	-116.234	16.861	62.340	-949.50	-419.33	421.34
			END-J	-116.234	16.861	62.340	-949.50	-188.64	358.95
32	TANGENT	7	END-I	-23.118	-37.798	6.674	579.44	-360.82	1299.33
			END-J	-23.118	-37.798	6.674	579.44	-336.13	1439.19
32	TANGENT	8	END-I	5.925	67.771	-18.989	-632.90	-1191.71	-1746.49
			END-J	5.925	67.771	-18.989	-632.90	-1261.98	-1997.27
32	TANGENT	9	END-I	-16.829	-18.741	2.098	336.25	-531.36	738.34
			END-J	-16.829	-18.741	2.098	336.25	-523.60	807.68
33	TANGENT	1	END-I	5.193	-18.488	28.639	726.91	3108.79	890.44
			END-J	5.193	-18.488	28.639	726.91	3389.77	1071.82
33	TANGENT	2	END-I	33.725	-12.271	-23.065	-92.83	155.15	37.03
			END-J	33.725	-12.271	-23.065	-92.83	-71.14	157.42
33	TANGENT	3	END-I	.973	3.157	5.024	-701.06	-91.70	-1280.40
			END-J	.973	3.157	5.024	-701.06	-42.41	-1311.37
33	TANGENT	4	END-I	-672.150	198.064	175.405	2201.64	-815.84	-2327.23
			END-J	-672.150	198.064	175.405	2201.64	905.07	-4270.45
33	TANGENT	5	END-I	-23.289	23.728	112.481	26.22	-4228.24	1207.15
			END-J	-23.289	23.728	112.481	26.22	-3124.68	974.36
33	TANGENT	6	END-I	-111.739	8.785	51.010	-951.47	-178.44	358.95
			END-J	-111.739	8.785	51.010	-951.47	322.03	272.76
33	TANGENT	7	END-I	-22.364	-30.888	5.864	575.80	-342.33	1439.19
			END-J	-22.364	-30.888	5.864	575.80	-284.80	1742.24
33	TANGENT	8	END-I	7.836	59.453	-13.899	-646.41	-1255.11	-1997.27
			END-J	7.836	59.453	-13.899	-646.41	-1391.47	-2580.56
33	TANGENT	9	END-I	-15.992	-14.777	2.758	330.61	-527.18	807.68
			END-J	-15.992	-14.777	2.758	330.61	-500.12	952.66
34	TANGENT	1	END-I	-.972	-6.331	.809	705.49	3394.29	1071.82
			END-J	-.972	-6.331	.809	705.49	3409.22	1188.63
34	TANGENT	2	END-I	31.333	-9.655	-14.855	-92.38	-71.72	157.42
			END-J	31.333	-9.655	-14.855	-92.38	-345.79	335.55
34	TANGENT	3	END-I	1.324	-16.970	5.174	-700.77	-46.84	-1311.37
			END-J	1.324	-16.970	5.174	-700.77	48.62	-998.26
34	TANGENT	4	END-I	-630.300	151.639	49.205	2195.88	918.96	-4270.45
			END-J	-630.300	151.639	49.205	2195.88	1826.80	-7068.19

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PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
34	TANGENT	5	END-I	-10.844	26.260	127.351	45.96	-3124.45	974.36
			END-J	-10.844	26.260	127.351	45.96	-774.83	489.85
34	TANGENT	6	END-I	-102.681	-6.682	29.930	-953.49	316.01	272.76
			END-J	-102.681	-6.682	29.930	-953.49	868.23	396.05
34	TANGENT	7	END-I	-19.815	-15.910	4.584	577.58	-281.16	1742.24
			END-J	-19.815	-15.910	4.584	577.58	-196.58	2035.79
34	TANGENT	8	END-I	10.062	39.416	-2.369	-637.61	-1395.53	-2580.56
			END-J	10.062	39.416	-2.369	-637.61	-1439.23	-3307.80
34	TANGENT	9	END-I	-13.764	-6.325	4.488	333.76	-498.02	952.66
			END-J	-13.764	-6.325	4.488	333.76	-415.22	1069.36
35	TANGENT	1	END-I	-7.728	6.168	-29.601	712.48	3407.76	1188.63
			END-J	-7.728	6.168	-29.601	712.48	3054.04	1114.92
35	TANGENT	2	END-I	28.663	-6.458	-6.785	-93.09	-345.60	335.55
			END-J	28.663	-6.458	-6.785	-93.09	-426.67	412.72
35	TANGENT	3	END-I	1.672	-29.608	4.524	-700.67	50.05	-998.26
			END-J	1.672	-29.608	4.524	-700.67	104.11	-644.45
35	TANGENT	4	END-I	-583.636	98.639	-38.385	2199.63	1822.29	-7068.19
			END-J	-583.636	98.639	-38.385	2199.63	1363.61	-8246.89
35	TANGENT	5	END-I	2.792	25.324	123.701	44.37	-774.92	489.86
			END-J	2.792	25.324	123.701	44.37	703.26	187.24
35	TANGENT	6	END-I	-92.885	-13.834	12.060	-951.70	870.18	396.05
			END-J	-92.885	-13.834	12.060	-951.70	1014.30	561.37
35	TANGENT	7	END-I	-17.253	1.155	3.824	577.18	-197.76	2035.79
			END-J	-17.253	1.155	3.824	577.18	-152.07	2021.98
35	TANGENT	8	END-I	12.881	14.109	10.591	-640.56	-1437.91	-3307.80
			END-J	12.881	14.109	10.591	-640.56	-1311.35	-3476.39
35	TANGENT	9	END-I	-11.435	3.190	6.588	332.91	-415.90	1069.36
			END-J	-11.435	3.190	6.588	332.91	-337.18	1031.23
36	TANGENT	1	END-I	-10.831	11.199	-42.441	699.93	3056.95	1114.92
			END-J	-10.831	11.199	-42.441	699.93	2979.92	1094.59
36	TANGENT	2	END-I	27.476	-4.775	-3.485	-91.34	-427.05	412.72
			END-J	27.476	-4.775	-3.485	-91.34	-433.38	421.39
36	TANGENT	3	END-I	1.976	-32.466	4.044	-701.09	101.23	-644.45
			END-J	1.976	-32.466	4.044	-701.09	108.57	-585.53

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PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
36	TANGENT	4	END-I	-562.909	70.470	-66.005	2194.00	1372.64	-8246.89
			END-J	-562.909	70.420	-66.005	2194.00	1252.84	-8374.70
36	TANGENT	5	END-I	8.849	23.939	116.951	41.48	703.43	187.24
			END-J	8.849	23.939	116.951	41.48	915.69	143.79
36	TANGENT	6	END-I	-88.368	-15.401	5.230	-955.86	1010.38	561.37
			END-J	-88.368	-15.401	5.230	-955.86	1019.87	589.32
36	TANGENT	7	END-I	-16.107	8.445	3.604	577.80	-149.69	2021.98
			END-J	-16.107	8.445	3.604	577.80	-143.15	2006.65
36	TANGENT	8	END-I	14.106	2.458	16.201	-635.17	-1313.97	-3476.39
			END-J	14.106	2.458	16.201	-635.17	-1284.57	-3480.85
36	TANGENT	9	END-I	-10.394	7.177	7.468	334.29	-335.81	1031.23
			END-J	-10.394	7.177	7.468	334.29	-322.25	1018.21
37	TANGENT	1	END-I	-15.780	19.297	-62.981	707.58	2978.11	1094.59
			END-J	-15.780	19.297	-62.981	707.58	1681.48	697.31
37	TANGENT	2	END-I	25.500	-2.279	1.795	-92.45	-433.14	421.39
			END-J	25.500	-2.279	1.795	-92.45	-396.18	468.30
37	TANGENT	3	END-I	2.187	-36.452	3.234	-700.81	110.37	-585.53
			END-J	2.187	-36.452	3.234	-700.81	176.95	164.92
37	TANGENT	4	END-I	-528.436	29.595	-108.245	2197.22	1247.20	-8374.70
			END-J	-528.436	29.595	-108.245	2197.22	-981.31	-8983.98
37	TANGENT	5	END-I	18.930	21.402	104.821	43.83	915.58	143.79
			END-J	18.930	21.402	104.821	43.83	3073.60	-296.83
37	TANGENT	6	END-I	-81.156	-16.648	-5.590	-953.24	1022.32	589.32
			END-J	-81.156	-16.648	-5.590	-953.24	907.24	932.07
37	TANGENT	7	END-I	-14.180	20.301	3.274	577.43	-144.64	2006.65
			END-J	-14.180	20.301	3.274	577.43	-77.23	1588.70
37	TANGENT	8	END-I	16.156	-16.587	25.231	-638.47	-1282.93	-3480.85
			END-J	16.156	-16.587	25.231	-638.47	-763.47	-3139.37
37	TANGENT	9	END-I	-8.646	13.665	8.868	333.46	-323.11	1018.21
			END-J	-8.646	13.665	8.868	333.46	-140.54	736.88
38	TANGENT	1	END-I	-24.937	28.671	-89.761	706.56	1681.91	697.31
			END-J	-24.937	28.671	-89.761	706.56	-165.04	107.36
38	TANGENT	2	END-I	21.867	2.250	9.025	-92.21	-396.23	468.30
			END-J	21.867	2.250	9.025	-92.21	-210.52	422.00

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PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
38	TANGENT	3	END-I	2.753	-30.881	1.284	-700.92	176.52	164.92
			END-J	2.753	-30.881	1.284	-700.92	202.94	800.33
38	TANGENT	4	END-I	-465.221	-45.648	-138.095	2197.81	-979.97	-8983.98
			END-J	-465.221	-45.648	-138.095	2197.81	-3821.44	-8044.73
38	TANGENT	5	END-I	37.313	13.121	63.761	41.96	3077.62	-296.83
			END-J	37.313	13.121	63.761	41.96	4385.58	-566.80
38	TANGENT	6	END-I	-67.797	-11.171	-19.740	-953.79	906.66	932.07
			END-J	-67.797	-11.171	-19.740	-953.79	500.49	1161.92
38	TANGENT	7	END-I	-10.678	36.514	3.044	577.48	-76.88	1588.70
			END-J	-10.678	36.514	3.044	577.48	-14.25	837.37
38	TANGENT	8	END-I	19.907	-47.201	38.061	-638.00	-763.86	-3139.37
			END-J	19.907	-47.201	38.061	-638.00	19.30	-2168.14
38	TANGENT	9	END-I	-5.463	22.049	10.358	333.55	-140.34	736.88
			END-J	-5.463	22.049	10.358	333.55	72.79	283.18
39	TANGENT	1	END-I	-30.679	28.591	-95.241	711.88	-140.31	107.36
			END-J	-30.679	28.591	-95.241	711.88	-212.54	85.68
39	TANGENT	2	END-I	19.819	4.782	11.295	-84.82	-213.61	422.00
			END-J	19.819	4.782	11.295	-84.82	-205.04	418.37
39	TANGENT	3	END-I	3.853	-23.371	.304	-707.57	178.38	800.33
			END-J	3.853	-23.371	.304	-707.57	178.61	818.06
39	TANGENT	4	END-I	-429.396	-92.224	-137.175	2329.67	-3742.51	-8044.73
			END-J	-429.396	-92.224	-137.175	2329.67	-3846.54	-7974.79
39	TANGENT	5	END-I	46.504	9.593	38.371	-110.92	4384.37	-566.80
			END-J	46.504	9.593	38.371	-110.92	4413.47	-574.08
39	TANGENT	6	END-I	-60.628	-7.936	-24.480	-970.66	466.95	1161.92
			END-J	-60.628	-7.936	-24.480	-970.66	448.38	1167.94
39	TANGENT	7	END-I	-10.242	39.947	2.974	577.62	5.89	837.37
			END-J	-10.242	39.947	2.974	577.62	8.15	807.08
39	TANGENT	8	END-I	23.827	-56.840	41.671	-638.29	-2.95	-2168.14
			END-J	23.827	-56.840	41.671	-638.29	28.65	-2125.04
39	TANGENT	9	END-I	-4.618	23.418	10.278	330.81	84.37	283.18
			END-J	-4.618	23.418	10.278	330.81	92.17	265.42
40	TANGENT	1	END-I	-32.310	30.031	-98.061	704.46	-235.97	85.68
			END-J	-32.310	30.031	-98.061	704.46	-1308.03	-242.64

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PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
40	TANGENT	2	END-I	18.930	5.117	12.505	-91.55	-202.13	418.37
			END-J	18.930	5.117	12.505	-91.55	-65.41	362.43
40	TANGENT	3	END-I	3.228	-19.374	-.226	-701.27	201.92	818.06
			END-J	3.228	-19.374	-.226	-701.27	199.45	1029.87
40	TANGENT	4	END-I	-414.156	-95.027	-136.425	2201.17	-3921.49	-7974.79
			END-J	-414.156	-95.027	-136.425	2201.17	-5412.97	-6935.89
40	TANGENT	5	END-I	52.002	5.227	24.441	35.12	4414.73	-574.08
			END-J	52.002	5.227	24.441	35.12	4681.93	-631.22
40	TANGENT	6	END-I	-57.060	-2.958	-27.030	-955.29	480.24	1167.94
			END-J	-57.060	-2.958	-27.030	-955.29	184.73	1200.28
40	TANGENT	7	END-I	-7.914	42.222	2.934	577.58	-10.96	807.08
			END-J	-7.914	42.222	2.934	577.58	21.11	345.48
40	TANGENT	8	END-I	23.002	-63.174	43.581	-636.99	49.75	-215.04
			END-J	23.002	-63.174	43.581	-636.99	526.21	-104.38
40	TANGENT	9	END-I	-2.935	24.321	10.218	333.67	81.17	265.42
			END-J	-2.935	24.321	10.218	333.67	192.88	-.47
41	BEND	1	END-I	-38.336	-99.145	-24.515	703.47	-194.56	1316.57
			CENTER	-47.178	-95.256	-24.515	673.80	-457.89	2112.30
			END-J	-55.630	-90.580	-24.515	620.35	-717.44	2872.97
41	BEND	2	END-I	16.499	14.063	-7.424	-91.60	364.58	52.03
			CENTER	17.708	12.507	-7.424	-60.89	310.74	-56.73
			END-J	18.770	10.848	-7.424	-35.19	254.33	-152.33
41	BEND	3	END-I	3.574	-1.038	8.172	-701.12	1021.85	-237.55
			CENTER	3.465	-1.358	8.172	-602.43	1148.04	-227.75
			END-J	3.327	-1.667	8.172	-492.70	1264.75	-215.37
41	BEND	4	END-I	-372.036	-122.971	131.255	2197.08	-6732.98	5664.97
			CENTER	-381.662	-88.693	131.255	1625.61	-5832.33	6531.36
			END-J	-388.138	-53.682	131.255	1138.25	-4883.52	7114.13
41	BEND	5	END-I	64.117	-7.563	1.668	38.65	-802.23	-4655.65
			CENTER	63.165	-13.352	1.668	-33.71	-788.80	-4570.03
			END-J	61.693	-19.031	1.668	-104.55	-768.86	-4437.48
41	BEND	6	END-I	-48.191	-31.532	-3.593	-955.15	1192.68	-229.28
			CENTER	-50.854	-27.028	-3.593	-844.28	1245.11	10.42
			END-J	-53.097	-22.300	-3.593	-729.11	1287.25	212.33
41	BEND	7	END-I	-5.553	1.259	-43.039	577.59	344.49	-33.31
			CENTER	-5.416	1.758	-43.039	590.49	-60.97	-45.66
			END-J	-5.234	2.242	-43.039	566.52	-465.93	-62.04

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PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
41	BEND	8	END-I	25.432	48.252	69.317	-636.59	-1452.70	-473.82
			CENTER	29.707	45.744	69.317	-740.08	-822.63	-858.56
			END-J	33.737	42.859	69.317	-785.94	-185.77	-1221.24
41	BEND	9	END-I	-.802	8.559	-24.158	333.82	-7.52	-192.48
			CENTER	-.022	8.597	-24.158	322.78	-235.15	-262.71
			END-J	.759	8.563	-24.158	291.13	-460.83	-332.95
42	BEND	1	END-I	-70.375	-70.432	-16.952	531.70	-761.96	2879.27
			CENTER	-76.107	-64.195	-16.952	459.49	-934.09	3395.17
			END-J	-81.288	-57.493	-16.952	372.90	-1099.45	3861.49
42	BEND	2	END-I	17.493	9.709	-8.513	-4.62	255.41	-154.51
			CENTER	18.255	8.187	-8.513	14.33	189.75	-223.09
			END-J	18.885	6.605	-8.513	27.63	122.72	-279.77
42	BEND	3	END-I	3.048	-3.605	-5.517	-338.14	1312.69	-226.37
			CENTER	2.731	-3.851	-5.517	-227.13	1294.47	-197.79
			END-J	2.394	-4.069	-5.517	-118.07	1266.89	-167.44
42	BEND	4	END-I	-340.001	-3.035	150.575	550.29	-4923.82	7156.00
			CENTER	-339.029	25.877	150.575	178.81	-3800.83	7068.47
			END-J	-335.602	54.602	150.575	-95.87	-2650.33	6760.07
42	BEND	5	END-I	62.369	-60.550	9.907	-198.07	-788.60	-4430.83
			CENTER	56.996	-65.632	9.907	-261.16	-693.11	-3947.29
			END-J	51.211	-70.239	9.907	-315.90	-592.61	-3426.62
42	BEND	6	END-I	-46.604	-21.596	-12.103	-569.93	1366.92	201.01
			CENTER	-48.271	-17.557	-12.103	-455.62	1317.83	351.05
			END-J	-49.589	-13.390	-12.103	-345.89	1259.20	469.64
42	BEND	7	END-I	-2.369	1.803	-36.908	506.75	-530.81	-57.79
			CENTER	-2.207	1.998	-36.908	447.77	-854.32	-72.36
			END-J	-2.029	2.179	-36.908	361.51	-1171.64	-88.37
42	BEND	8	END-I	41.262	36.617	67.575	-803.16	-100.90	-1219.99
			CENTER	44.225	32.977	67.575	-786.82	484.70	-1446.68
			END-J	46.868	29.098	67.575	-720.76	1066.80	-1724.56
42	BEND	9	END-I	3.661	5.813	-19.532	233.79	-495.14	-328.87
			CENTER	4.142	5.480	-19.532	184.49	-662.65	-372.14
			END-J	4.593	5.108	-19.532	121.14	-825.36	-412.72
43	BEND	1	END-I	-85.455	-19.626	-4.180	248.39	-1148.60	3857.20
			CENTER	-87.329	-7.832	-4.180	86.52	-1322.82	4025.89
			END-J	-87.583	4.107	-4.180	-83.93	-1274.36	4048.77
43	BEND	2	END-I	16.685	5.402	-8.270	41.15	119.87	-279.35
			CENTER	17.264	3.084	-8.270	50.15	12.03	-331.48
			END-J	17.523	.710	-8.270	44.42	-96.03	-354.79

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PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
43	BEND	3	END-I	1.386	-5.624	-20.386	24.95	1272.74	-162.77
			CENTER	.609	-5.760	-20.386	180.65	1008.22	-92.83
			END-J	-.180	-5.790	-20.386	298.96	725.00	-21.87
43	BEND	4	END-I	-263.436	78.223	151.259	-390.62	-2647.66	6750.51
			CENTER	-250.363	113.294	151.259	-620.50	-720.16	5573.95
			END-J	-232.645	146.264	151.259	-586.34	1220.70	3979.39
43	BEND	5	END-I	37.097	-107.526	16.252	-381.71	-540.75	-3428.50
			CENTER	22.141	-111.570	16.252	-438.08	-285.11	-2082.52
			END-J	6.775	-113.543	16.252	-459.19	-24.18	-699.57
43	BEND	6	END-I	-41.649	-14.955	-21.159	-202.06	1288.35	474.46
			CENTER	-43.295	-9.157	-21.159	-42.78	1045.10	622.59
			END-J	-44.137	-3.189	-21.159	81.96	782.45	698.44
43	BEND	7	END-I	1.171	1.134	-21.987	227.55	-1204.51	-92.88
			CENTER	1.314	.964	-21.987	43.41	-1493.15	-105.77
			END-J	1.433	.777	-21.987	-178.24	-1754.10	-116.46
43	BEND	8	END-I	51.170	15.203	53.106	-596.96	1147.36	-1720.13
			CENTER	52.761	8.108	53.106	-391.18	1867.31	-1863.34
			END-J	53.374	.864	53.106	-89.47	2552.62	-1918.46
43	BEND	9	END-I	6.438	.348	-9.746	27.49	-832.22	-415.80
			CENTER	6.425	-.530	-9.746	-93.99	-947.43	-414.68
			END-J	6.294	-1.398	-9.746	-229.99	-1045.07	-402.83
44	BEND	1	END-I	-61.665	66.243	16.289	-303.91	-1224.19	4053.71
			CENTER	-50.052	75.402	16.289	-479.67	-919.56	3008.55
			END-J	-37.102	82.548	16.289	-603.46	-590.37	1843.08
44	BEND	2	END-I	13.795	-1.438	-5.153	26.85	-103.71	-354.39
			CENTER	13.376	-3.666	-5.153	3.41	-182.23	-316.73
			END-J	12.601	-5.796	-5.153	-32.51	-255.89	-246.91
44	BEND	3	END-I	-2.209	-5.847	-28.710	420.97	661.56	-24.61
			CENTER	-3.131	-5.409	-28.710	488.60	163.30	58.45
			END-J	-3.971	-4.827	-28.710	474.17	-339.32	133.97
44	BEND	4	END-I	-134.532	127.684	102.864	-362.88	1319.98	3974.35
			CENTER	-111.938	147.891	102.864	-19.42	2869.33	1940.95
			END-J	-86.356	164.149	102.864	571.81	4342.06	-361.51
44	BEND	5	END-I	-29.695	-119.303	16.020	-456.58	53.63	-699.64
			CENTER	-48.730	-112.874	16.020	-422.49	362.11	1013.53
			END-J	-66.464	-103.429	16.020	-338.62	660.92	2609.57
44	BEND	6	END-I	-35.419	-4.565	-25.309	217.57	758.85	695.39
			CENTER	-35.690	1.265	-25.309	307.85	342.28	719.74
			END-J	-35.007	7.061	-25.309	329.07	-83.43	658.31

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PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
44	BEND	7	END-I	4.677	-1.662	6.698			
			CENTER	4.344	-2.402	6.698	-481.87	-1696.46	-109.64
			END-J	3.894	-3.077	6.698	-743.70	-1497.12	-79.66
44	BEND	8	END-I	47.626	-23.696	11.737			
			CENTER	43.130	-31.137	11.737	357.08	2521.46	-1928.50
			END-J	37.483	-37.746	11.737	777.11	2601.68	-1523.90
44	BEND	9	END-I	4.892	-8.606	7.043			
			CENTER	3.425	-9.287	7.043	-409.10	-990.42	-398.81
			END-J	1.866	-9.721	7.043	-556.49	-807.33	-266.78
45	TANGENT	1	END-I	16.335	-108.651	-21.935	-713.93	373.73	-1860.18
			END-J	16.335	-108.651	-21.935	-713.93	60.99	-311.07
45	TANGENT	2	END-I	8.789	6.636	1.251	-84.77	253.82	236.41
			END-J	8.789	6.636	1.251	-84.77	271.66	141.80
45	TANGENT	3	END-I	-5.214	3.582	22.233	393.34	424.27	-152.33
			END-J	-5.214	3.582	22.233	393.34	741.26	-203.40
45	TANGENT	4	END-I	-27.770	-109.227	-35.676	1460.73	-4109.83	535.41
			END-J	-27.770	-109.227	-35.676	1460.73	-4618.48	2092.73
45	TANGENT	5	END-I	-90.300	59.938	-10.190	-195.60	-826.82	-2576.72
			END-J	-90.300	59.938	-10.190	-195.60	-972.10	-3431.29
45	TANGENT	6	END-I	-28.876	-7.536	20.301	304.21	121.85	-664.25
			END-J	-28.876	-7.536	20.301	304.21	411.30	-556.81
45	TANGENT	7	END-I	5.162	3.471	-25.191	-1209.48	1029.96	-3.74
			END-J	5.162	3.471	-25.191	-1209.48	670.80	-53.22
45	TANGENT	8	END-I	19.676	51.015	22.481	1721.13	-2260.43	1111.47
			END-J	19.676	51.015	22.481	1721.13	-1939.90	384.12
45	TANGENT	9	END-I	-2.874	11.239	-16.462	-782.46	455.04	107.78
			END-J	-2.874	11.239	-16.462	-782.46	220.37	-52.47
46	TANGENT	1	END-I	42.652	-117.251	-25.102	-714.12	60.99	-310.63
			END-J	42.652	-117.251	-25.102	-714.12	-392.75	1808.79
46	TANGENT	2	END-I	7.053	5.226	-1.191	-84.68	271.66	141.86
			END-J	7.053	5.226	-1.191	-84.68	250.13	47.40
46	TANGENT	3	END-I	-5.449	2.152	14.548	393.22	741.26	-203.64
			END-J	-5.449	2.152	14.548	393.22	1004.23	-242.53
46	TANGENT	4	END-I	-11.149	-56.717	7.500	1462.02	-4618.48	2091.83
			END-J	-11.149	-56.717	7.500	1462.02	-4482.91	3117.04

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PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
46	TANGENT	5	END-I	-92.928	34.388	-1.800	-197.71	-972.10	
			END-J	-92.928	34.388	-1.800	-197.71	-1004.64	-3431.17
46	TANGENT	6	END-I	-25.987	-4.756	14.197	303.86	411.30	-556.99
			END-J	-25.987	-4.756	14.197	303.86	667.93	-471.03
46	TANGENT	7	END-I	6.581	2.641	-33.860	-1209.51	670.80	-52.48
			END-J	6.581	2.641	-33.860	-1209.51	58.75	-100.21
46	TANGENT	8	END-I	12.850	52.475	44.334	1721.37	-1939.90	383.06
			END-J	12.850	52.475	44.334	1721.37	-1138.52	-565.47
46	TANGENT	9	END-I	-4.874	11.459	-19.749	-782.49	220.33	-51.99
			END-J	-4.874	11.459	-19.749	-782.49	-136.65	-259.13
47	TANGENT	1	END-I	72.158	-115.901	-22.769	-714.06	-392.75	1808.81
			END-J	72.158	-115.901	-22.769	-714.06	-804.63	3905.44
47	TANGENT	2	END-I	5.118	3.566	-3.427	-84.68	250.13	47.40
			END-J	5.118	3.566	-3.427	-84.68	188.13	-17.10
47	TANGENT	3	END-I	-5.717	.392	3.146	393.21	1004.23	-242.54
			END-J	-5.717	.392	3.146	393.21	1061.15	-249.63
47	TANGENT	4	END-I	7.233	-4.127	50.313	1462.12	-4482.91	3116.99
			END-J	7.233	-4.127	50.313	1462.12	-3572.77	3191.64
47	TANGENT	5	END-I	-95.606	2.408	8.057	-197.85	-1004.64	-4052.74
			END-J	-95.606	2.408	8.057	-197.85	-858.89	-4096.30
47	TANGENT	6	END-I	-22.756	-3.096	5.459	303.85	667.93	-471.04
			END-J	-22.756	-3.096	5.459	303.85	766.69	-415.03
47	TANGENT	7	END-I	8.133	.601	-35.515	-1209.52	58.75	-100.17
			END-J	8.133	.601	-35.515	-1209.52	-583.71	-111.03
47	TANGENT	8	END-I	5.095	47.575	59.173	1721.35	-1138.52	-565.53
			END-J	5.095	47.575	59.173	1721.35	-68.09	-1426.15
47	TANGENT	9	END-I	-7.104	10.129	-17.974	-782.50	-136.65	-259.10
			END-J	-7.104	10.129	-17.974	-782.50	-461.79	-442.34
48	BEND	1	END-I	106.702	101.522	7.881	-714.64	596.35	-3942.52
			CENTER	119.376	86.265	7.881	-621.60	782.27	-5083.12
			END-J	129.884	69.443	7.881	-504.42	953.99	-6028.88
48	BEND	2	END-I	2.853	-1.357	5.285	-84.68	-186.96	27.06
			CENTER	2.645	-1.728	5.285	-104.72	-109.97	45.80
			END-J	2.389	-2.068	5.285	-114.23	-30.99	68.86
48	BEND	3	END-I	-6.012	2.106	11.215	393.24	-1046.42	305.51
			CENTER	-5.675	2.895	11.215	258.23	-954.15	275.13
			END-J	-5.235	3.631	11.215	136.84	-844.58	235.49

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PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	X-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
48	BEND	4	END-I	28.504	-50.356	-86.391	1461.65	3398.43	-3376.88
			CENTER	21.479	-53.730	-86.391	1834.51	2126.51	-2744.67
			END-J	14.065	-56.129	-86.391	2033.10	816.03	-2077.39
48	BEND	5	END-I	-98.443	31.374	-20.213	-197.24	1074.96	4045.00
			CENTER	-93.335	44.317	-20.213	-67.51	847.29	3585.26
			END-J	-86.534	56.456	-20.213	30.45	604.25	2973.17
48	BEND	6	END-I	-18.954	2.591	5.490	303.91	-743.60	455.07
			CENTER	-18.434	2.114	5.490	295.72	-711.30	408.27
			END-J	-17.580	7.545	5.490	112.76	-666.10	331.38
48	BEND	7	END-I	9.883	4.434	27.304	-1209.50	588.79	80.10
			CENTER	10.389	3.066	27.304	-1097.14	1076.14	34.54
			END-J	10.707	1.642	27.304	-920.31	1543.98	5.95
48	BEND	8	END-I	-4.109	-36.836	-60.691	1721.56	143.63	1420.27
			CENTER	-9.021	-35.950	-60.691	1675.72	-822.91	1862.37
			END-J	-13.770	-34.412	-60.691	1500.43	-1774.52	2289.74
48	BEND	9	END-I	-9.715	-6.344	9.509	-782.43	484.61	417.34
			CENTER	-10.479	-4.981	9.509	-702.46	700.34	486.13
			END-J	-11.053	-3.528	9.509	-594.23	903.37	537.81
49	BEND	1	END-I	162.560	.433	-8.505	-322.29	1030.77	-6028.72
			CENTER	161.317	-20.064	-8.505	-195.88	966.68	-5916.91
			END-J	157.501	-40.241	-8.505	-78.55	887.17	-5573.41
49	BEND	2	END-I	.544	.163	5.499	-117.97	-10.44	68.73
			CENTER	.560	.093	5.499	-114.40	66.91	67.27
			END-J	.567	.022	5.499	-101.10	143.20	66.62
49	BEND	3	END-I	-3.779	6.458	24.140	-14.18	-855.59	235.06
			CENTER	-2.935	6.883	24.140	-104.60	-573.08	159.08
			END-J	-2.044	7.198	24.140	-158.67	-281.43	78.87
49	BEND	4	END-I	7.870	-95.605	-100.442	2147.17	446.50	-2074.91
			CENTER	-4.246	-95.834	-100.442	2114.20	-957.40	-984.51
			END-J	-16.294	-94.534	-100.442	1903.25	-2365.86	99.80
49	BEND	5	END-I	-65.470	92.585	-28.353	133.17	588.03	2973.59
			CENTER	-53.276	100.100	-28.353	185.88	244.85	1876.09
			END-J	-40.231	106.018	-28.353	194.91	-102.25	702.07
49	BEND	6	END-I	-12.028	9.136	15.851	-6.57	-675.71	331.05
			CENTER	-10.780	10.579	15.851	-80.32	-489.65	218.76
			END-J	-9.360	11.854	15.851	-130.03	-295.77	90.98
49	BEND	7	END-I	14.240	3.037	4.920	-634.24	1681.84	6.09
			CENTER	14.510	1.217	4.920	-413.62	1804.21	-18.14
			END-J	14.547	-.622	4.920	-179.33	1897.78	-21.54

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PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
49	BEND	8	END-I	-18.509	-1.638	-42.221	1162.30	-2011.98	2290.01
			CENTER	-18.568	.708	-42.221	869.06	-2621.50	2295.31
			END-J	-18.330	3.043	-42.221	501.32	-3189.19	2273.94
49	BEND	9	END-I	-12.371	3.645	-9.042	-426.55	993.59	537.84
			CENTER	-11.812	5.176	-9.042	-304.37	936.85	487.60
			END-J	-11.066	6.624	-9.042	-190.33	865.16	420.39
50	BEND	1	END-I	151.214	-112.807	-27.396	43.87	954.79	-5562.61
			CENTER	134.283	-132.511	-27.396	151.25	600.99	-4038.81
			END-J	114.805	-149.702	-27.396	209.00	235.79	-2285.83
50	BEND	2	END-I	.054	1.955	4.001	-76.40	156.83	68.80
			CENTER	.322	1.929	4.001	-50.71	215.31	44.68
			END-J	.584	1.866	4.001	-17.24	269.70	21.11
50	BEND	3	END-I	.379	7.332	28.993	-201.71	-253.06	76.64
			CENTER	1.383	7.210	28.993	-209.82	135.53	-13.68
			END-J	2.360	6.952	28.993	-164.47	521.55	-101.65
50	BEND	4	END-I	-35.881	-100.004	-83.402	1496.75	-2643.01	62.34
			CENTER	-49.279	-94.127	-83.402	1048.29	-3854.77	1268.20
			END-J	-61.743	-86.464	-83.402	437.61	-4993.44	2389.95
50	BEND	5	END-I	-10.538	107.307	-26.420	178.59	-140.75	699.74
			CENTER	4.304	107.737	-26.420	135.02	-490.62	-636.01
			END-J	19.064	106.124	-26.420	43.79	-831.18	-1964.43
50	BEND	6	END-I	-4.183	9.866	20.667	-175.71	-271.98	88.42
			CENTER	-2.788	10.347	20.667	-193.77	10.27	-37.13
			END-J	-1.340	10.632	20.667	-172.89	252.32	-167.44
50	BEND	7	END-I	18.954	.484	-23.151	129.30	1901.97	.70
			CENTER	18.841	-2.124	-23.151	369.61	1579.93	10.89
			END-J	18.370	-4.693	-23.151	563.40	1227.94	53.24
50	BEND	8	END-I	-2.416	40.108	-4.056	-11.18	-3255.25	2235.23
			CENTER	3.117	40.060	-4.056	-461.74	-3273.00	1737.27
			END-J	8.592	39.252	-4.056	-910.47	-3228.68	1244.62
50	BEND	9	END-I	-8.718	13.380	-29.218	-46.53	879.44	431.12
			CENTER	-6.797	14.451	-29.218	49.80	516.24	258.24
			END-J	-4.747	15.248	-29.218	95.32	143.25	73.76
51	BEND	1	END-I	73.705	-185.809	-35.345	245.47	172.29	-2287.87
			CENTER	50.440	-193.424	-35.345	240.84	-247.84	-194.04
			END-J	26.419	-198.140	-35.345	184.89	-664.24	1967.87
51	BEND	2	END-I	.941	2.523	1.300	32.74	268.45	18.59
			CENTER	1.242	2.389	1.300	66.18	276.74	-8.53
			END-J	1.525	2.220	1.300	100.39	280.88	-33.98

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PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
51	BEND	3	END-I	4.276	5.001	23.334	-65.80	541.96	-106.53
			CENTER	4.855	4.441	23.334	16.69	802.63	-158.67
			END-J	5.362	3.814	23.334	130.42	1051.27	-204.25
51	BEND	4	END-I	-76.438	-56.841	-37.657	-485.63	-4966.50	2436.36
			CENTER	-82.813	-47.071	-37.657	-1114.48	-5284.17	3010.09
			END-J	-87.945	-36.596	-37.657	-1777.44	-5522.59	3472.03
51	BEND	5	END-I	39.769	69.978	-18.070	-112.86	-843.03	-1956.61
			CENTER	48.025	64.592	-18.070	-227.26	-1021.70	-2699.60
			END-J	55.560	58.237	-18.070	-362.63	-1185.05	-3377.76
51	BEND	6	END-I	1.838	6.258	17.673	-116.37	317.60	-170.19
			CENTER	2.589	5.986	17.673	-64.75	523.86	-237.79
			END-J	3.301	5.625	17.673	11.70	722.26	-301.90
51	BEND	7	END-I	23.273	-5.145	-45.408	779.90	1103.66	41.96
			CENTER	22.470	-7.951	-45.408	878.32	500.52	114.27
			END-J	21.330	-10.638	-45.408	902.27	-110.12	216.91
51	BEND	8	END-I	44.242	60.832	40.099	-1487.46	-2994.31	1274.34
			CENTER	51.346	54.968	40.099	-1815.25	-2348.91	634.99
			END-J	57.679	48.279	40.099	-2061.70	-1668.28	64.94
51	BEND	9	END-I	.544	17.006	-42.393	120.17	123.93	72.45
			CENTER	2.618	16.812	-42.393	105.81	-358.06	-114.27
			END-J	4.654	16.366	-42.393	32.63	-834.68	-297.46
52	TANGENT	1	END-I	-10.326	-173.346	21.597	77.33	-33.99	2083.46
			END-J	-10.326	-173.346	21.597	77.33	399.91	5566.08
52	TANGENT	2	END-I	1.840	1.120	-1.627	143.37	237.77	-114.18
			END-J	1.840	1.120	-1.627	143.37	205.09	-136.67
52	TANGENT	3	END-I	5.574	4.466	11.855	294.38	902.42	-512.71
			END-J	5.574	4.466	11.855	294.38	1140.60	-602.44
52	TANGENT	4	END-I	-81.951	8.295	7.473	-2625.96	-3825.77	4917.43
			END-J	-81.951	8.295	7.473	-2625.96	-3675.63	4750.78
52	TANGENT	5	END-I	50.793	8.665	-9.273	-543.54	-2115.50	-2859.08
			END-J	50.793	8.665	-9.273	-543.54	-2301.81	-3033.17
52	TANGENT	6	END-I	3.372	3.842	9.970	125.37	581.01	-509.56
			END-J	3.372	3.842	9.970	125.37	781.32	-586.74
52	TANGENT	7	END-I	25.886	-28.031	-48.170	873.60	-170.12	284.85
			END-J	25.886	-28.031	-48.170	873.60	-1137.89	848.02
52	TANGENT	8	END-I	95.001	63.947	56.233	-2298.67	-1236.15	475.41
			END-J	95.001	63.947	56.233	-2298.67	-106.39	-809.32

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PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
52	TANGENT	9	END-I	8.888	-1.296	-45.209	-99.09	-880.85	-22.64
			END-J	8.888	-1.296	-45.209	-99.09	-1789.12	3.39
53	TANGENT	1	END-I	-15.507	-102.865	9.446	80.62	419.89	5564.56
			END-J	-15.507	-102.865	9.446	80.62	609.76	7632.14
53	TANGENT	2	END-I	1.825	-.457	-3.098	143.30	204.59	-137.49
			END-J	1.825	-.457	-3.098	143.30	142.32	-128.31
53	TANGENT	3	END-I	5.261	-1.769	1.382	294.07	1138.42	-606.70
			END-J	5.261	-1.769	1.382	294.07	1166.20	-571.14
53	TANGENT	4	END-I	-71.614	51.436	35.414	-2623.29	-3658.45	4765.49
			END-J	-71.614	51.436	35.414	-2623.29	-2946.64	3731.63
53	TANGENT	5	END-I	38.011	-25.354	14.029	-545.41	-2312.66	-3024.56
			END-J	38.011	-25.354	14.029	-545.41	-2030.67	-2514.96
53	TANGENT	6	END-I	2.626	-2.748	3.406	125.06	779.21	-589.61
			END-J	2.626	-2.748	3.406	125.06	847.68	-534.37
53	TANGENT	7	END-I	31.815	-24.805	-47.003	874.06	-1134.87	851.58
			END-J	31.815	-24.805	-47.008	874.06	-2079.72	1350.16
53	TANGENT	8	END-I	123.763	66.358	75.697	-2299.15	-109.21	-807.58
			END-J	123.763	66.358	75.697	-2299.15	1412.30	-2141.36
53	TANGENT	9	END-I	10.434	-3.425	-34.904	-99.15	-1789.09	9.87
			END-J	10.434	-3.425	-34.904	-99.15	-2490.65	79.72
54	TANGENT	1	END-I	-20.872	13.750	-11.415	81.29	607.66	7632.30
			END-J	-20.872	13.750	-11.415	81.29	370.94	7347.15
54	TANGENT	2	END-I	1.796	-2.158	-3.760	143.54	142.12	-128.27
			END-J	1.796	-2.158	-3.760	143.54	64.14	-83.52
54	TANGENT	3	END-I	4.917	-7.941	-8.502	296.00	1165.86	-570.83
			END-J	4.917	-7.941	-8.502	296.00	989.55	-406.14
54	TANGENT	4	END-I	-60.827	91.508	52.691	-2628.26	-2943.31	3730.76
			END-J	-60.827	91.508	52.691	-2628.26	-1850.57	1833.00
54	TANGENT	5	END-I	24.817	-57.882	34.704	-548.62	-2029.13	-2515.51
			END-J	24.817	-57.882	34.704	-548.62	-1309.41	-1315.10
54	TANGENT	6	END-I	1.836	-9.022	-3.282	126.46	847.61	-534.15
			END-J	1.836	-9.022	-3.282	126.46	779.54	-347.04
54	TANGENT	7	END-I	37.557	-19.991	-35.003	870.60	-2081.50	1349.66
			END-J	37.557	-19.991	-35.003	870.60	-2807.41	1764.25

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PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
54	TANGENT	8	END-I	152.572	51.992	82.887	-2296.74	1416.60	-2141.09
			END-J	152.572	51.992	82.887	-2296.74	3135.57	-3219.34
54	TANGENT	9	END-I	11.942	-5.014	-15.485	-103.22	-2490.51	78.08
			END-J	11.942	-5.014	-15.485	-103.22	-2811.64	182.07
55	TANGENT	1	END-I	-26.266	168.218	-40.829	78.92	358.59	7347.79
			END-J	-26.266	168.218	-40.829	78.92	-464.15	3956.03
55	TANGENT	2	END-I	1.765	-3.588	-3.513	143.51	64.40	-83.37
			END-J	1.765	-3.588	-3.513	143.51	-6.39	-11.07
55	TANGENT	3	END-I	4.578	-12.868	-15.456	295.23	990.50	-404.38
			END-J	4.578	-12.868	-15.456	295.23	679.04	-145.08
55	TANGENT	4	END-I	-50.115	121.785	54.979	-2627.13	-1856.00	1829.14
			END-J	-50.115	121.785	54.979	-2627.13	-748.12	-624.95
55	TANGENT	5	END-I	11.643	-83.638	48.438	-547.09	-1307.68	-1317.47
			END-J	11.643	-83.638	48.438	-547.09	-331.59	367.91
55	TANGENT	6	END-I	1.058	-13.980	-8.471	125.87	780.24	-345.69
			END-J	1.058	-13.980	-8.471	125.87	609.54	-63.98
55	TANGENT	7	END-I	43.024	-18.321	-11.990	872.60	-2809.62	1759.74
			END-J	43.024	-18.321	-11.990	872.60	-3051.22	2128.93
55	TANGENT	8	END-I	180.661	19.281	74.172	-2298.63	3138.97	-3214.68
			END-J	180.661	19.281	74.172	-2298.63	4633.60	-3603.21
55	TANGENT	9	END-I	13.362	-6.252	9.558	-100.78	-2812.03	177.29
			END-J	13.362	-6.252	9.558	-100.78	-2619.43	303.28
56	TANGENT	1	END-I	-31.593	338.770	-76.768	78.97	-464.14	3958.03
			END-J	-31.593	338.770	-76.768	78.97	-2012.15	-2873.19
56	TANGENT	2	END-I	1.730	-4.540	-2.431	143.51	-6.37	-11.07
			END-J	1.730	-4.540	-2.431	143.51	-55.40	80.48
56	TANGENT	3	END-I	4.217	-15.993	-17.843	295.16	679.07	-145.08
			END-J	4.217	-15.993	-17.843	295.16	319.28	177.42
56	TANGENT	4	END-I	-39.393	140.453	40.341	-2627.05	-748.42	-624.95
			END-J	-39.393	140.453	40.341	-2627.05	65.04	-3457.16
56	TANGENT	5	END-I	-1.413	-100.207	53.410	-547.05	-331.66	367.91
			END-J	-1.413	-100.207	53.410	-547.05	745.35	2388.57
56	TANGENT	6	END-I	.270	-17.111	-10.867	125.80	609.56	-63.98
			END-J	.270	-17.111	-10.867	125.80	390.42	281.07

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PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
56	TANGENT	7	END-I	48.004	-26.058	20.158	872.95	-3051.12	2128.93
			END-J	48.004	-26.058	20.158	872.95	-2644.63	2654.40
56	TANGENT	8	END-I	207.700	-28.649	49.243	-2299.15	4633.34	-3603.21
			END-J	207.700	-28.649	49.243	-2299.15	5626.32	-3025.52
56	TANGENT	9	END-I	14.634	-7.084	24.335	-100.48	-2619.44	303.28
			END-J	14.634	-7.084	24.335	-100.48	-1927.08	446.12
57	BEND	1	END-I	-143.144	-146.159	32.239	79.26	-1325.98	-3247.41
			CENTER	-160.016	-127.466	32.239	-62.26	-969.22	-1728.96
			END-J	-174.463	-106.842	32.239	-158.88	-597.77	-428.70
57	BEND	2	END-I	3.556	6.928	-2.201	143.43	-71.95	66.27
			CENTER	4.380	6.438	-2.201	132.00	-113.35	-7.91
			END-J	5.138	5.851	-2.201	115.58	-153.04	-76.10
57	BEND	3	END-I	8.750	17.270	-19.765	295.26	271.85	243.84
			CENTER	10.806	16.064	-19.765	312.95	14.98	58.85
			END-J	12.697	14.615	-19.765	298.94	-242.12	-111.40
57	BEND	4	END-I	-79.032	-175.366	56.013	-2625.12	830.94	-3357.95
			CENTER	-99.978	-164.329	56.013	-2464.97	1766.47	-1472.85
			END-J	-119.408	-150.802	56.013	-2191.09	2675.24	275.92
57	BEND	5	END-I	7.026	22.092	16.707	-547.88	198.30	2494.11
			CENTER	9.687	21.061	16.707	-507.98	448.83	2254.64
			END-J	12.201	19.712	16.707	-437.60	692.57	2028.37
57	BEND	6	END-I	3.646	10.570	-14.903	125.89	318.39	360.60
			CENTER	4.917	10.042	-14.903	153.89	135.73	246.21
			END-J	6.114	9.362	-14.903	159.24	-48.98	138.53
57	BEND	7	END-I	83.948	131.360	39.156	869.83	-3167.42	2003.18
			CENTER	99.450	120.052	39.156	500.81	-2817.35	608.00
			END-J	113.446	106.925	39.156	177.60	-2424.59	-651.58
57	BEND	8	END-I	298.007	305.666	-32.702	-2293.96	6158.31	-1705.35
			CENTER	333.301	266.739	-32.702	-1542.31	6031.91	-4881.84
			END-J	363.546	223.772	-32.702	-811.89	5814.12	-7603.87
57	BEND	9	END-I	18.100	-4.314	49.835	-101.94	-1977.96	8.26
			CENTER	17.432	-6.505	49.835	-310.19	-1399.44	68.30
			END-J	16.501	-8.597	49.835	-445.79	-799.71	152.11
58	BEND	1	END-I	-141.272	35.568	25.053	-313.32	-533.42	-428.53
			CENTER	-136.184	51.739	25.053	-357.90	-231.48	-886.49
			END-J	-129.252	67.209	25.053	-367.10	73.60	-1510.42
58	BEND	2	END-I	5.987	3.424	.318	70.32	-178.44	-76.07
			CENTER	6.344	2.706	.318	49.31	-182.07	-108.22
			END-J	6.615	1.950	.318	28.02	-183.24	-132.65

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PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
58	BEND	3	END-I	14.743	9.059	-10.561	223.10	-313.41	-111.35
			CENTER	15.695	7.285	-10.561	178.75	-447.62	-197.08
			END-J	16.435	5.412	-10.561	119.10	-575.77	-263.68
58	BEND	4	END-I	-135.173	-100.443	6.331	-1393.89	3164.69	275.27
			CENTER	-145.927	-84.060	6.331	-1012.95	3371.37	1243.06
			END-J	-154.704	-66.538	6.331	-610.59	3532.41	2033.00
58	BEND	5	END-I	2.637	19.574	3.865	-235.77	785.02	2028.20
			CENTER	4.893	19.135	3.865	-140.63	847.50	1825.15
			END-J	7.083	18.437	3.865	-38.87	898.51	1628.07
58	BEND	6	END-I	6.979	6.725	-9.450	140.30	-89.84	138.54
			CENTER	7.713	5.869	-9.450	123.16	-204.33	72.48
			END-J	8.342	4.933	-9.450	92.83	-316.06	15.82
58	BEND	7	END-I	109.374	5.372	72.503	-478.80	-2383.65	-650.94
			CENTER	109.257	-7.371	72.503	-708.28	-1553.85	-640.45
			END-J	107.661	-20.013	72.503	-839.82	-703.00	-496.81
58	BEND	8	END-I	407.094	60.500	-95.299	775.36	5817.11	-7605.40
			CENTER	411.366	12.799	-95.299	1387.81	4691.28	-7989.88
			END-J	410.068	-35.076	-95.299	1865.33	3501.92	-7873.03
58	BEND	9	END-I	13.955	-12.573	52.148	-643.80	-650.94	152.33
			CENTER	12.400	-14.109	52.148	-683.29	-26.51	292.28
			END-J	10.677	-15.454	52.148	-649.96	598.27	447.35
59	BEND	1	END-I	-39.257	91.730	11.627	-335.02	165.90	-1510.56
			CENTER	-26.714	96.134	11.627	-300.71	348.06	-2639.37
			END-J	-13.698	98.833	11.627	-242.48	524.04	-3810.86
59	BEND	2	END-I	5.974	-.303	2.746	-19.69	-184.24	-132.76
			CENTER	5.880	-1.094	2.746	-41.81	-147.13	-124.37
			END-J	5.683	-1.866	2.746	-58.81	-107.42	-106.59
59	BEND	3	END-I	15.219	.493	1.830	-31.95	-586.93	-264.03
			CENTER	15.149	-1.535	1.830	-108.22	-555.58	-257.77
			END-J	14.811	-3.535	1.830	-179.66	-514.36	-227.30
59	BEND	4	END-I	-139.834	-19.666	-45.893	311.83	3569.94	2035.22
			CENTER	-141.207	-.903	-45.893	746.97	2947.74	2158.81
			END-J	-140.074	17.876	-45.893	1095.54	2273.22	2056.83
59	BEND	5	END-I	.140	26.250	-10.125	191.12	877.65	1628.69
			CENTER	3.628	25.998	-10.125	298.00	723.31	1314.76
			END-J	7.052	25.285	-10.125	383.42	556.14	1006.61
59	BEND	6	END-I	7.794	3.057	-1.189	8.89	-329.29	15.64
			CENTER	8.131	1.994	-1.189	-35.91	-341.78	-14.71
			END-J	8.324	.896	-1.189	-81.98	-348.20	-32.07

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PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
59	BEND	7	END-I	27.686	-120.537	86.409	-991.35	-464.53	-497.76
			CENTER	11.417	-123.148	86.409	-975.29	705.17	966.46
			END-J	-5.055	-123.573	86.409	-803.87	1862.36	2448.93
59	BEND	8	END-I	368.588	-150.210	-130.370	2704.44	2912.75	-7869.53
			CENTER	345.348	-197.874	-130.370	2963.50	967.64	-5778.00
			END-J	315.979	-242.027	-130.370	2961.70	-994.64	-3134.79
59	BEND	9	END-I	10.427	-7.139	30.220	-475.63	744.36	447.44
			CENTER	9.386	-8.462	30.220	-348.32	1162.53	541.18
			END-J	8.178	-9.634	30.220	-166.55	1560.07	649.91
60	BEND	1	END-I	60.038	-2.741	-12.560	-80.81	243.26	-3845.83
			CENTER	58.430	-14.070	-12.560	-53.73	39.93	-3701.15
			END-J	54.705	-24.888	-12.560	-65.68	-164.85	-3365.86
60	BEND	2	END-I	3.637	-2.668	4.475	-87.43	-94.58	-98.83
			CENTER	3.065	-3.308	4.475	-96.47	.03	-47.40
			END-J	2.383	-3.829	4.475	-87.42	94.64	14.03
60	BEND	3	END-I	11.045	-4.163	14.912	-321.05	-458.07	-188.70
			CENTER	10.056	-6.181	14.912	-377.72	-134.57	-99.68
			END-J	8.702	-7.975	14.912	-372.06	193.81	22.15
60	BEND	4	END-I	-95.763	36.092	-87.614	1707.67	2027.50	1889.81
			CENTER	-87.188	53.587	-87.614	1918.07	172.74	1118.00
			END-J	-75.452	69.140	-87.614	1773.14	-1688.29	61.78
60	BEND	5	END-I	6.129	33.904	-22.522	528.31	505.83	966.75
			CENTER	12.443	32.128	-22.522	577.86	12.38	398.46
			END-J	18.306	29.188	-22.522	533.00	-481.51	-129.24
60	BEND	6	END-I	7.151	1.541	8.315	-179.38	-311.11	-5.41
			CENTER	7.314	.158	8.315	-221.53	-129.64	-20.03
			END-J	7.211	-1.231	8.315	-228.52	56.52	-10.80
60	BEND	7	END-I	-180.637	-162.929	68.532	-229.23	2217.80	2267.30
			CENTER	-208.242	-125.743	68.532	307.01	3389.97	4751.70
			END-J	-228.298	-83.999	68.532	1055.69	4439.28	6556.79
60	BEND	8	END-I	256.519	-202.622	-69.080	2545.82	-2072.24	-2968.59
			CENTER	213.469	-247.565	-69.080	1994.29	-3695.43	905.85
			END-J	162.683	-283.534	-69.080	1145.12	-5184.67	5476.63
60	BEND	9	END-I	27.554	19.658	-30.531	292.84	1591.39	515.43
			CENTER	30.780	14.080	-30.531	539.33	986.29	225.07
			END-J	32.890	7.991	-30.531	666.68	345.45	35.12
61	BEND	1	END-I	10.657	-122.552	-30.872	-121.59	-138.65	-3365.49
			CENTER	-7.806	-122.767	-30.872	-172.27	-534.74	-1703.88
			END-J	-26.092	-120.216	-30.872	-281.66	-918.78	-58.10

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PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
61	BEND	2	END-I	.463	-2.596	2.456	-43.52	121.32	13.53
			CENTER	.070	-2.636	2.456	-22.38	159.55	48.97
			END-J	-.326	-2.617	2.456	4.24	194.19	84.54
61	BEND	3	END-I	7.286	-4.194	13.089	-266.81	323.82	20.68
			CENTER	6.577	-5.237	13.089	-202.07	536.42	84.56
			END-J	5.719	-6.163	13.089	-106.24	736.93	161.78
61	BEND	4	END-I	-34.494	47.968	-54.599	972.72	-2246.54	71.10
			CENTER	-26.926	52.591	-54.599	570.17	-3102.28	-610.02
			END-J	-18.751	56.028	-54.599	44.09	-3888.13	-1345.72
61	BEND	5	END-I	24.589	24.461	-10.862	302.69	-651.94	-126.52
			CENTER	27.973	20.505	-10.862	190.69	-836.21	-431.08
			END-J	30.727	16.087	-10.862	52.38	-1001.64	-678.93
61	BEND	6	END-I	8.473	.522	9.244	-188.27	141.25	-11.51
			CENTER	8.455	-.752	9.244	-155.64	292.36	-9.94
			END-J	8.248	-2.009	9.244	-100.76	436.89	8.76
61	BEND	7	END-I	-412.028	35.599	-30.900	2699.54	3698.63	6545.67
			CENTER	-402.059	96.866	-30.900	3191.38	2836.70	5648.45
			END-J	-383.033	155.951	-30.900	3548.67	1910.86	3936.06
61	BEND	8	END-I	313.894	-5.973	94.318	-976.43	-5199.61	5495.11
			CENTER	309.464	-52.886	94.318	-1648.04	-3724.42	5493.78
			END-J	298.063	-98.608	94.318	-2091.29	-2165.33	6919.89
61	BEND	9	END-I	98.258	38.751	-90.671	748.62	57.72	35.63
			CENTER	102.951	23.609	-90.671	656.90	-1276.34	-346.75
			END-J	105.325	7.934	-90.671	366.56	-2581.64	-400.39
62	BEND	1	END-I	-84.492	-98.104	-33.198	-561.58	-781.32	-32.01
			CENTER	-88.046	-94.927	-33.198	-591.99	-870.12	287.89
			END-J	-91.481	-91.621	-33.198	-625.65	-957.73	597.06
62	BEND	2	END-I	-.539	-1.220	.561	66.09	185.46	78.17
			CENTER	-.583	-1.200	.561	72.91	184.76	82.18
			END-J	-.627	-1.177	.561	79.70	183.81	86.12
62	BEND	3	END-I	7.159	-4.159	7.012	135.49	737.36	135.91
			CENTER	7.001	-4.420	7.012	162.97	755.10	150.13
			END-J	6.833	-4.675	7.012	191.09	771.83	165.20
62	BEND	4	END-I	-12.756	31.802	-18.495	-1202.33	-3742.33	-1216.51
			CENTER	-11.577	32.250	-18.495	-1340.42	-3756.81	-1322.66
			END-J	-10.382	32.654	-18.495	-1478.95	-3766.19	-1430.22
62	BEND	5	END-I	31.760	4.338	.982	-269.78	-989.14	-644.83
			CENTER	31.898	3.166	.982	-305.96	-975.28	-657.26
			END-J	31.993	1.989	.982	-341.60	-960.11	-665.81

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PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
62	BEND	6	END-I	9.897	-2.497	6.216	44.84	446.14	-7.07
			CENTER	9.798	-2.860	6.216	61.62	464.78	1.81
			END-J	9.687	-3.218	6.216	79.06	482.79	11.88
62	BEND	7	END-I	-404.654	279.126	-100.287	3961.23	811.08	3922.74
			CENTER	-394.103	293.834	-100.287	3982.28	332.40	2973.19
			END-J	-383.018	308.144	-100.287	3985.70	-146.72	1975.54
62	BEND	8	END-I	519.299	-49.446	212.472	-2608.88	-1130.74	6955.89
			CENTER	517.127	-68.531	212.472	-2725.71	-326.60	7151.41
			END-J	514.253	-87.523	212.472	-2722.93	477.98	7410.04
62	BEND	9	END-I	153.455	-16.022	-78.685	-479.88	-2582.54	-509.84
			CENTER	152.761	-21.660	-78.685	-579.43	-2823.84	-447.39
			END-J	151.860	-27.270	-78.685	-687.80	-3061.31	-366.30
63	TANGENT	1	END-I	-114.430	74.313	17.149	-704.37	705.86	-819.02
			END-J	-114.430	74.313	17.149	-704.37	1083.74	-2456.47
63	TANGENT	2	END-I	-.046	.564	.993	94.37	-193.48	-34.87
			END-J	-.046	.564	.993	94.37	-171.61	-47.29
63	TANGENT	3	END-I	10.010	2.493	-2.034	253.75	-770.07	46.19
			END-J	10.010	2.493	-2.034	253.75	-814.88	-8.73
63	TANGENT	4	END-I	-22.192	-16.604	-10.083	-1781.03	3885.07	388.80
			END-J	-22.192	-16.604	-10.083	-1781.03	3662.91	754.67
63	TANGENT	5	END-I	29.676	-1.463	-11.179	-417.86	1075.48	387.97
			END-J	29.676	-1.463	-11.179	-417.86	829.15	420.21
63	TANGENT	6	END-I	11.944	1.839	-3.819	118.66	-459.89	117.90
			END-J	11.944	1.839	-3.819	118.66	-544.04	77.37
63	TANGENT	7	END-I	-433.905	-287.477	233.946	3954.27	-85.25	-2041.23
			END-J	-433.905	-287.477	233.946	3954.27	5069.66	4293.21
63	TANGENT	8	END-I	750.372	-44.475	-307.850	-2695.33	-2696.85	-6929.19
			END-J	750.372	-44.475	-307.850	-2695.33	-9480.20	-5949.20
63	TANGENT	9	END-I	194.179	46.463	44.848	-937.39	2980.91	-462.93
			END-J	194.179	46.463	44.848	-937.39	3969.12	-1486.72
64	TANGENT	1	END-I	-137.889	23.020	27.010	-706.32	1093.57	-2451.55
			END-J	-137.889	23.020	27.010	-706.32	1689.07	-2959.08
64	TANGENT	2	END-I	.990	-.196	3.451	94.38	-171.38	-48.06
			END-J	.990	-.196	3.451	94.38	-95.30	-43.73
64	TANGENT	3	END-I	15.538	.736	7.602	253.97	-814.77	-12.23
			END-J	15.538	.736	7.602	253.97	-647.15	-28.47

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PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
64	TANGENT	4	END-I	-44.634	2.814	-61.235	-1781.55	3659.28	770.84
			END-J	-44.634	2.814	-61.235	-1781.55	2309.19	708.79
64	TANGENT	5	END-I	25.901	-.498	-24.634	-417.81	827.31	423.87
			END-J	25.901	-.498	-24.634	-417.81	284.19	434.85
64	TANGENT	6	END-I	15.866	1.035	1.858	118.86	-544.32	75.06
			END-J	15.866	1.035	1.858	118.86	-503.35	52.23
64	TANGENT	7	END-I	-552.116	-164.842	237.694	3955.72	5053.19	4311.25
			END-J	-552.116	-164.842	237.694	3955.72	10293.82	7945.66
64	TANGENT	8	END-I	1130.974	-219.778	-396.141	-2696.65	-9456.57	-5986.11
			END-J	1130.974	-219.778	-396.141	-2696.65	-18190.62	-1140.48
64	TANGENT	9	END-I	263.386	-1.362	-52.313	-939.50	3974.90	-1469.85
			END-J	263.386	-1.362	-52.313	-939.50	2821.51	-1439.21
65	BEND	1	END-I	-157.549	-22.137	-36.668	-701.85	2392.23	2427.48
			CENTER	-158.900	-7.888	-36.668	-497.37	2149.04	2549.15
			END-J	-158.966	6.425	-36.668	-315.57	1888.45	2555.08
65	BEND	2	END-I	1.877	-4.584	-2.267	94.35	67.81	-80.02
			CENTER	1.457	-4.734	-2.267	99.24	40.72	-42.26
			END-J	1.026	-4.846	-2.267	101.67	13.29	-3.43
65	BEND	3	END-I	20.282	-13.555	-5.286	253.47	202.31	-615.58
			CENTER	18.982	-15.323	-5.286	268.70	135.96	-498.55
			END-J	17.528	-16.967	-5.286	277.90	68.50	-367.69
65	BEND	4	END-I	-63.903	85.693	45.625	-1780.39	-1305.77	2033.18
			CENTER	-55.942	91.090	45.625	-1873.93	-771.44	1316.77
			END-J	-47.530	95.749	45.625	-1919.06	-230.86	559.61
65	BEND	5	END-I	22.596	30.965	11.354	-418.03	-495.20	156.37
			CENTER	25.287	28.809	11.354	-456.71	-363.79	-85.86
			END-J	27.774	26.420	11.354	-483.42	-229.43	-309.68
65	BEND	6	END-I	19.225	-5.942	-1.703	118.40	85.82	-498.84
			CENTER	18.613	-7.646	-1.703	125.01	61.06	-443.77
			END-J	17.850	-9.288	-1.703	129.37	35.80	-375.15
65	BEND	7	END-I	-653.735	-192.173	5.480	3955.90	-10437.61	7755.71
			CENTER	-668.361	-132.642	5.480	3003.83	-10706.58	9072.02
			END-J	-677.577	-72.038	5.480	2031.44	-10888.88	9901.48
65	BEND	8	END-I	1464.214	529.328	-201.866	-2710.40	6021.97	-17200.60
			CENTER	1505.861	395.593	-201.866	-2231.74	4608.39	-20948.82
			END-J	1535.320	258.656	-201.866	-1882.07	3157.51	-23600.15
65	BEND	9	END-I	323.743	204.827	-5.846	-935.69	623.41	3106.84
			CENTER	340.841	174.903	-5.846	-878.00	657.69	1568.00
			END-J	355.181	143.563	-5.846	-817.47	686.65	277.42

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PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
66	BEND	1	END-I	-166.253	51.773	-76.265	69.02	1928.37	2543.80
			CENTER	-160.939	66.475	-76.265	214.03	1298.77	2065.57
			END-J	-154.329	80.642	-76.265	302.00	658.71	1470.58
66	BEND	2	END-I	.446	-5.885	-3.062	102.28	-7.18	-3.52
			CENTER	-.083	-5.901	-3.062	100.11	-41.04	44.14
			END-J	-.612	-5.870	-3.062	94.92	-74.56	91.75
66	BEND	3	END-I	16.085	-24.793	-8.169	285.49	9.81	-368.13
			CENTER	13.797	-26.136	-8.169	282.26	-81.77	-162.16
			END-J	11.397	-27.268	-8.169	270.82	-172.70	53.81
66	BEND	4	END-I	-36.391	123.219	63.814	-1925.95	158.04	551.23
			CENTER	-25.193	125.986	63.814	-1880.87	845.27	-446.52
			END-J	-13.791	127.738	63.814	-1774.32	1525.69	-1472.75
66	BEND	5	END-I	31.310	24.630	15.518	-519.76	-130.68	-308.24
			CENTER	33.393	21.722	15.518	-523.76	41.73	-495.70
			END-J	35.207	18.640	15.518	-512.27	213.81	-658.94
66	BEND	6	END-I	17.315	-15.835	-3.328	133.41	7.22	-375.38
			CENTER	15.825	-17.324	-3.328	132.31	-31.64	-241.27
			END-J	14.208	-18.674	-3.328	127.73	-70.24	-95.69
66	BEND	7	END-I	-756.494	99.958	281.251	-157.99	-11017.53	9966.09
			CENTER	-744.479	167.407	281.251	-1043.52	-8688.61	8884.79
			END-J	-726.464	233.506	281.251	-1716.59	-6289.66	7263.39
66	BEND	8	END-I	1840.041	-111.972	-251.231	-1248.67	3330.70	-23618.35
			CENTER	1822.582	-276.558	-251.231	-1036.03	1401.27	-22047.02
			END-J	1790.431	-438.914	-251.231	-997.30	-539.46	-19153.45
66	BEND	9	END-I	482.533	205.706	-21.207	-664.49	836.89	273.42
			CENTER	499.038	161.598	-21.207	-594.45	721.93	-1212.06
			END-J	511.521	116.187	-21.207	-534.99	601.14	-2335.50
67	BEND	1	END-I	-140.960	123.954	-104.271	428.44	585.99	1469.96
			CENTER	-129.240	136.129	-104.271	441.37	-298.98	415.16
			END-J	-116.472	147.202	-104.271	374.66	-1181.52	-733.93
67	BEND	2	END-I	-1.624	-6.229	-3.597	77.95	-92.06	91.85
			CENTER	-2.178	-6.058	-3.597	68.04	-127.81	141.68
			END-J	-2.714	-5.837	-3.597	54.96	-162.53	189.92
67	BEND	3	END-I	6.596	-32.308	-10.176	230.48	-223.65	54.06
			CENTER	3.663	-32.770	-10.176	205.72	-325.85	318.00
			END-J	.701	-32.967	-10.176	171.87	-425.41	584.60
67	BEND	4	END-I	8.786	141.078	75.981	-1430.60	1850.20	-1474.82
			CENTER	21.439	139.716	75.981	-1230.68	2586.43	-2613.62
			END-J	33.918	137.221	75.981	-965.34	3301.69	-3736.77

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PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
67	BEND	5	END-I	37.991	13.369	18.610	-458.69	311.89	-659.29
			CENTER	39.040	9.897	18.610	-421.99	502.52	-753.65
			END-J	39.772	6.346	18.610	-368.29	689.09	-819.53
67	BEND	6	END-I	10.861	-23.513	-4.464	110.97	-94.64	-95.58
			CENTER	8.702	-24.394	-4.464	100.38	-140.37	98.72
			END-J	6.472	-25.078	-4.464	85.72	-184.96	299.36
67	BEND	7	END-I	-721.907	440.603	635.548	-2948.51	-5807.06	7269.64
			CENTER	-679.352	503.748	635.548	-3227.03	-373.68	3439.70
			END-J	-631.290	562.808	635.548	-3015.73	5062.73	-885.85
67	BEND	8	END-I	1898.314	-986.582	-257.416	-1084.92	-348.44	-19153.12
			CENTER	1801.884	-1153.322	-257.416	-1205.76	-2333.19	-10474.46
			END-J	1690.848	-1310.714	-257.416	-1504.62	-4299.02	-481.24
67	BEND	9	END-I	681.952	124.406	-31.322	-402.87	694.03	-2336.27
			CENTER	690.377	62.565	-31.322	-350.24	473.91	-3094.55
			END-J	693.206	.217	-31.322	-317.62	249.95	-3349.18
68	BEND	1	END-I	-86.416	176.745	-117.440	130.30	-1230.75	-737.07
			CENTER	-70.207	183.786	-117.440	-23.31	-2185.98	-2195.91
			END-J	-53.431	189.345	-117.440	-262.02	-3123.56	-3705.74
68	BEND	2	END-I	-3.806	-5.437	-3.853	21.24	-170.73	189.49
			CENTER	-4.278	-5.074	-3.853	4.44	-203.07	232.02
			END-J	-4.716	-4.669	-3.853	-15.20	-233.77	271.44
68	BEND	3	END-I	-5.743	-34.005	-11.203	83.04	-452.72	583.45
			CENTER	-8.772	-33.353	-11.203	38.01	-548.82	856.00
			END-J	-11.729	-32.431	-11.203	-15.46	-640.49	1122.19
68	BEND	4	END-I	60.124	133.448	81.855	-283.47	3437.75	-3728.01
			CENTER	71.857	127.514	81.855	55.89	4110.41	-4783.95
			END-J	83.009	120.551	81.855	454.25	4749.91	-5787.71
68	BEND	5	END-I	40.296	-1.125	20.084	-222.59	751.02	-817.63
			CENTER	40.033	-4.737	20.084	-147.00	930.17	-793.91
			END-J	39.446	-8.310	20.084	-55.64	1101.82	-741.12
68	BEND	6	END-I	1.459	-27.044	-5.067	46.87	-199.15	298.85
			CENTER	-.974	-27.066	-5.067	26.97	-243.48	517.80
			END-J	-3.399	-26.869	-5.067	3.17	-285.84	736.05
68	BEND	7	END-I	-535.066	753.014	1053.469	-1939.58	5566.74	-871.83
			CENTER	-465.334	797.992	1053.469	-1049.68	14226.56	-7147.76
			END-J	-391.846	750.530	1053.469	613.74	22771.59	-13761.62
68	BEND	8	END-I	1526.810	-1929.404	-232.392	-2335.77	-3908.91	-491.53
			CENTER	1347.510	-2058.632	-232.392	-2761.51	-5560.42	15645.50
			END-J	1157.336	-2171.249	-232.392	-3333.73	-7167.07	32761.13

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PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	LOAD CASE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
68	BEND	9	END-I	874.053	-72.457	-36.352	-260.67	317.12	-3348.41
			CENTER	864.024	-150.600	-36.352	-244.36	45.65	-2445.84
			END-J	847.024	-227.528	-36.352	-252.48	-226.20	-915.80
69	TANGENT	1	END-I	-14.321	-214.221	87.523	-884.84	2397.40	4126.41
			END-J	-14.321	-214.221	87.523	-884.84	3183.01	6049.26
69	TANGENT	2	END-I	-5.559	3.016	4.408	-61.90	265.22	-233.21
			END-J	-5.559	3.016	4.408	-61.90	304.78	-260.28
69	TANGENT	3	END-I	-18.032	27.532	15.778	-143.96	790.43	-1012.07
			END-J	-18.032	27.532	15.778	-143.96	932.05	-1259.19
69	TANGENT	4	END-I	105.627	-88.197	-97.429	1400.20	-5402.16	5012.15
			END-J	105.627	-88.197	-97.429	1400.20	-6276.68	5803.81
69	TANGENT	5	END-I	36.999	19.018	-17.565	167.07	-1192.05	563.45
			END-J	36.999	19.018	-17.565	167.07	-1349.71	392.74
69	TANGENT	6	END-I	-8.743	24.724	9.073	-54.38	391.16	-683.76
			END-J	-8.743	24.724	9.073	-54.38	472.60	-905.68
69	TANGENT	7	END-I	-215.759	-727.789	-1533.944	5180.71	-24045.22	10163.28
			END-J	-215.759	-727.789	-1533.944	5180.71	-37813.90	16695.92
69	TANGENT	8	END-I	696.980	2582.225	598.073	-4706.96	11343.17	-31383.90
			END-J	696.980	2582.225	598.073	-4706.96	16711.47	-54561.95
69	TANGENT	9	END-I	946.271	383.779	97.641	-292.81	27.04	931.20
			END-J	946.271	383.779	97.641	-292.81	903.46	-2513.61

A-197

SUMMARY OF SUPPORT FORCES/MOMENTS IN GLOBAL/LOCAL SYSTEMS

BDRY= BOUNDARY ELEMENTS (SPRING)
 THAM= THERMAL ANCHOR MOTION
 SEAM= SEISMIC ANCHOR MOTION
 SNBR= SNUBBER ELEMENT

LOAD CASE 1 GROUP 1 X EXCITATION

KIND OF SUPPORT	NODE NUMBER	GLOBAL COMPONENTS						LOCAL COMPONENTS	
		FX	FY	FZ	MX	MY	MZ	FL	ML
BDRY	7090	-160.	0.	0.	0.	0.	0.	-160.	0.
BDRY	7090	0.	65.	0.	0.	0.	0.	65.	0.
BDRY	7090	0.	0.	24.	0.	0.	0.	24.	0.
BDRY	7090	0.	0.	0.	-2635.	0.	0.	0.	-2635.
BDRY	7090	0.	0.	0.	0.	-4984.	0.	0.	-4984.
BDRY	3047	0.	0.	0.	0.	0.	-1252.	0.	-1252.
BDRY	3116	0.	0.	0.	0.	0.	0.	0.	0.
BDRY	3210	-677.	0.	0.	0.	0.	0.	-677.	0.
BDRY	3210	0.	0.	0.	0.	0.	0.	0.	0.
BDRY	3250	88.	0.	0.	0.	0.	0.	88.	0.
BDRY	3250	0.	214.	0.	0.	0.	0.	214.	0.
BDRY	3250	0.	0.	14.	0.	0.	0.	14.	0.
BDRY	3250	0.	0.	0.	6049.	0.	0.	0.	6049.
BDRY	3250	0.	0.	0.	0.	-3183.	0.	0.	-3183.
BDRY	3250	0.	0.	0.	0.	0.	885.	0.	885.
BDRY	3035	0.	14.	0.	0.	0.	0.	14.	0.
BDRY	3083	0.	0.	29.	0.	0.	0.	29.	0.

A-198

SUMMARY OF SUPPORT FORCES/MOMENTS IN GLOBAL/LOCAL SYSTEMS

BDRY= BOUNDARY ELEMENTS (SPRING)
 THAM= THERMAL ANCHOR MOTION
 SEAM= SEISMIC ANCHOR MOTION
 SNBR= SNUBBER ELEMENT

LOAD CASE 2 GROUP 1 Y EXCITATION

KIND OF SUPPORT	NODE NUMBER	GLOBAL COMPONENTS						LOCAL COMPONENTS	
		FX	FY	FZ	MX	MY	MZ	FL	ML
BDRY	7090	216.	0.	0.	0.	0.	0.	216.	0.
PDRY	7090	0.	32.	0.	0.	0.	0.	32.	0.
BDRY	7090	0.	0.	63.	0.	0.	0.	63.	0.
BDRY	7090	0.	0.	0.	-2574.	0.	0.	0.	-2574.
BDRY	7090	0.	0.	0.	0.	2071.	0.	0.	2071.
BDRY	7090	0.	0.	0.	0.	0.	7562.	0.	7562.
BDRY	3047	0.	0.	0.	0.	0.	0.	0.	0.
BDRY	3116	0.	0.	0.	0.	0.	0.	0.	0.
BDRY	3210	12.	0.	0.	0.	0.	0.	12.	0.
BDRY	3210	0.	0.	0.	0.	0.	0.	0.	0.
BDRY	3250	4.	0.	0.	0.	0.	0.	4.	0.
BDRY	3250	0.	-3.	0.	0.	0.	0.	-3.	0.
BDRY	3250	0.	0.	6.	0.	0.	0.	6.	0.
BDRY	3250	0.	0.	0.	-260.	0.	0.	0.	-260.
BDRY	3250	0.	0.	0.	0.	-305.	0.	0.	-305.
BDRY	3250	0.	0.	0.	0.	0.	62.	0.	62.
BDRY	3035	0.	-31.	0.	0.	0.	0.	-31.	0.
BDRY	3083	0.	0.	2.	0.	0.	0.	2.	0.

661-A

SUMMARY OF SUPPORT FORCES/MOMENTS IN GLOBAL/LOCAL SYSTEMS

BDRY= BOUNDARY ELEMENTS (SPRING)
 THAM= THERMAL ANCHOR MOTION
 SEAM= SEISMIC ANCHOR MOTION
 SNBR= SNUBBER ELEMENT

LOAD CASE 3 GROUP 1 Z EXCITATION

KIND OF SUPPORT	NODE NUMBER	FX	FY	GLOBAL COMPONENTS				LOCAL COMPONENTS	
				FZ	MX	MY	MZ	FL	ML
BDRY	7090	-22.	0.	0.	0.	0.	0.	-22.	0.
BDRY	7090	0.	1.	0.	0.	0.	0.	1.	0.
BDRY	7090	0.	0.	-49.	0.	0.	0.	-49.	0.
BDRY	7090	0.	0.	0.	1558.	0.	0.	0.	1558.
BDRY	7090	0.	0.	0.	0.	2002.	0.	0.	2002.
BDRY	3047	0.	0.	0.	0.	0.	-473.	0.	-473.
BDRY	3116	0.	0.	0.	0.	0.	0.	0.	0.
BDRY	3210	31.	0.	0.	0.	0.	0.	31.	0.
BDRY	3210	0.	0.	0.	0.	0.	0.	0.	0.
BDRY	3250	16.	0.	0.	0.	0.	0.	16.	0.
BDRY	3250	0.	-28.	0.	0.	0.	0.	-28.	0.
BDRY	3250	0.	0.	18.	0.	0.	0.	18.	0.
BDRY	3250	0.	0.	0.	-1259.	0.	0.	0.	-1259.
BDRY	3250	0.	0.	0.	0.	-932.	0.	0.	-932.
BDRY	3250	0.	0.	0.	0.	0.	144.	0.	144.
BDRY	3035	0.	3.	0.	0.	0.	0.	3.	0.
BDRY	3083	0.	0.	-29.	0.	0.	0.	-29.	0.

A-200

SUMMARY OF SUPPORT FORCES/MOMENTS IN GLOBAL/LOCAL SYSTEMS

BDRY= BOUNDARY ELEMENTS (SPRING)
 THAM= THERMAL ANCHOR MOTION
 SEAM= SEISMIC ANCHOR MOTION
 SNBR= SNUBBER ELEMENT

LOAD CASE 4 GROUP 2 X EXCITATION

KIND OF SUPPORT	NODE NUMBER	FX	FY	GLOBAL COMPONENTS			LOCAL COMPONENTS		
				FZ	MX	MY	MZ	FL	ML
BDRY	7090	-8192.	0.	0.	0.	0.	0.	-8192.	0.
BDRY	7090	0.	1012.	0.	0.	0.	0.	1012.	0.
BDRY	7090	0.	0.	-1966.	0.	0.	0.	-1966.	0.
BDRY	7090	0.	0.	0.	32203.	0.	0.	0.	32203.
BDRY	7090	0.	0.	0.	0.	-84130.	0.	0.	-84130.
BDRY	3047	0.	0.	0.	0.	0.	-179502.	0.	-179502.
BDRY	3116	0.	0.	0.	0.	0.	0.	0.	0.
BDRY	3210	-325.	0.	0.	0.	0.	0.	-325.	0.
BDRY	3210	0.	0.	0.	0.	0.	0.	0.	0.
BDRY	3250	-97.	0.	0.	0.	0.	0.	-97.	0.
BDRY	3250	0.	88.	0.	0.	0.	0.	88.	0.
BDRY	3250	0.	0.	-106.	0.	0.	0.	-106.	0.
BDRY	3250	0.	0.	0.	5804.	0.	0.	0.	5804.
BDRY	3250	0.	0.	0.	0.	6277.	0.	0.	6277.
BDRY	3035	0.	0.	0.	0.	0.	-1400.	0.	-1400.
BDRY	3083	0.	502.	0.	0.	0.	0.	502.	0.
BDRY	3083	0.	0.	-41.	0.	0.	0.	-41.	0.

A-201

SUMMARY OF SUPPORT FORCES/MOMENTS IN GLOBAL/LOCAL SYSTEMS

BDRY= BOUNDARY ELEMENTS (SPRING)
 THAM= THERMAL ANCHOR MOTION
 SEAM= SEISMIC ANCHOR MOTION
 SNBR= SNUBBER ELEMENT

LOAD CASE 5 GROUP 2 Y EXCITATION

KIND OF SUPPORT	NODE NUMBER	FX	FY	GLOBAL COMPONENTS			LOCAL COMPONENTS		
				FZ	MX	MY	MZ	FL	ML
BDRY	7090	1086.	0.	0.	0.	0.	0.	1086.	0.
BDRY	7090	0.	-2136.	0.	0.	0.	0.	-2136.	0.
BDRY	7090	0.	0.	322.	0.	0.	0.	322.	0.
BDRY	7090	0.	0.	0.	27965.	0.	0.	0.	27965.
BDRY	7090	0.	0.	0.	0.	10013.	0.	0.	10013.
BDRY	3047	0.	0.	0.	0.	0.	-32159.	0.	-32159.
BDRY	3116	0.	0.	0.	0.	0.	0.	0.	0.
BDRY	3210	141.	0.	0.	0.	0.	0.	141.	0.
BDRY	3210	0.	0.	0.	0.	0.	0.	0.	0.
BDRY	3250	-18.	0.	0.	0.	0.	0.	-18.	0.
BDRY	3250	0.	-19.	0.	0.	0.	0.	-19.	0.
BDRY	3250	0.	0.	-37.	0.	0.	0.	-37.	0.
BDRY	3250	0.	0.	0.	393.	0.	0.	0.	393.
BDRY	3250	0.	0.	0.	0.	1350.	0.	0.	1350.
BDRY	3035	0.	81.	0.	0.	0.	-167.	0.	-167.
BDRY	3083	0.	0.	1.	0.	0.	0.	1.	0.

A-202

SUMMARY OF SUPPORT FORCES/MOMENTS IN GLOBAL/LOCAL SYSTEMS

BDRY= BOUNDARY ELEMENTS (SPRING)
 THAM= THERMAL ANCHOR MOTION
 SEAM= SEISMIC ANCHOR MOTION
 SNBR= SNUBBER ELEMENT

LOAD CASE 6 GROUP 2 Z EXCITATION

KIND OF SUPPORT	NODE NUMBER	FX	FY	GLOBAL COMPONENTS				LOCAL COMPONENTS	
				FZ	MX	MY	MZ	FL	ML
BDRY	7090	-1081.	0.	0.	0.	0.	0.	-1081.	0.
BDRY	7090	0.	165.	0.	0.	0.	0.	165.	0.
BDRY	7090	0.	0.	-1375.	0.	0.	0.	-1375.	0.
BDRY	7090	0.	0.	0.	32054.	0.	0.	0.	32054.
BDRY	7090	0.	0.	0.	0.	21013.	0.	0.	21013.
BDRY	3047	0.	0.	0.	0.	0.	-23074.	0.	-23074.
BDRY	3116	0.	0.	0.	0.	0.	0.	0.	0.
BDRY	3210	27.	0.	0.	0.	0.	0.	27.	0.
BDRY	3210	0.	0.	0.	0.	0.	0.	0.	0.
BDRY	3250	9.	0.	0.	0.	0.	0.	9.	0.
BDRY	3250	0.	-25.	0.	0.	0.	0.	-25.	0.
BDRY	3250	0.	0.	9.	0.	0.	0.	9.	0.
BDRY	3250	0.	0.	0.	-906.	0.	0.	0.	-906.
BDRY	3250	0.	0.	0.	0.	-473.	0.	0.	-473.
BDRY	3035	0.	0.	0.	0.	0.	54.	0.	54.
BDRY	3083	0.	0.	-50.	0.	0.	0.	79.	0.
								-50.	0.

A-203

SUMMARY OF SUPPORT FORCES/MOMENTS IN GLOBAL/LOCAL SYSTEMS

BDRY= BOUNDARY ELEMENTS (SPRING)
 THAM= THERMAL ANCHOR MOTION
 SEAM= SEISMIC ANCHOR MOTION
 SNBR= SNUBBER ELEMENT

LOAD CASE 7 GROUP 3 X EXCITATION

KIND OF SUPPORT	NODE NUMBER	FX	FY	GLOBAL COMPONENTS			LOCAL COMPONENTS		
				FZ	MX	MY	MZ	FL	ML
BDRY	7090	-109.	0.	0.	0.	0.	0.	-109.	0.
BDRY	7090	0.	-18.	0.	0.	0.	0.	-18.	0.
BDRY	7090	0.	0.	18.	0.	0.	0.	18.	0.
BDRY	7090	0.	0.	0.	-122.	0.	0.	0.	-122.
BDRY	7090	0.	0.	0.	0.	-3571.	0.	0.	-3571.
BDRY	3047	0.	0.	0.	0.	0.	-4104.	0.	-4104.
BDRY	3116	0.	0.	0.	0.	0.	0.	0.	0.
BDRY	3210	199.	0.	0.	0.	0.	0.	199.	0.
BDRY	3210	0.	0.	0.	0.	0.	0.	0.	0.
BDRY	3250	-1662.	0.	0.	0.	0.	0.	-1662.	0.
BDRY	3250	0.	728.	0.	0.	0.	0.	728.	0.
BDRY	3250	0.	0.	216.	0.	0.	0.	216.	0.
BDRY	3250	0.	0.	0.	16696.	0.	0.	0.	16696.
BDRY	3250	0.	0.	0.	0.	37814.	0.	0.	37814.
BDRY	3250	0.	0.	0.	0.	0.	-5181.	0.	-5181.
BDRY	3035	0.	11.	0.	0.	0.	0.	11.	0.
BDRY	3083	0.	0.	33.	0.	0.	0.	33.	0.

A-204

SUMMARY OF SUPPORT FORCES/MOMENTS IN GLOBAL/LOCAL SYSTEMS

BDRY= BOUNDARY ELEMENTS (SPRING)
 THAM= THERMAL ANCHOR MOTION
 SEAM= SEISMIC ANCHOR MOTION
 SNBR= SNUBBER ELEMENT

LOAD CASE 8 GROUP 3 Y EXCITATION

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KIND OF SUPPORT	NODE NUMBER	FX	FY	GLOBAL COMPONENTS			LOCAL COMPONENTS		
				FZ	MX	MY	MZ	FL	ML
BDRY	7090	81.	0.	0.	0.	0.	0.	81.	0.
BDRY	7090	0.	-16.	0.	0.	0.	0.	-16.	0.
BDRY	7090	0.	0.	-41.	0.	0.	0.	-41.	0.
BDRY	7090	0.	0.	0.	1612.	0.	0.	0.	1612.
BDRY	7090	0.	0.	0.	0.	4179.	0.	0.	4179.
BDRY	3047	0.	0.	0.	0.	0.	1534.	0.	1534.
BDRY	3116	0.	0.	0.	0.	0.	0.	0.	0.
BDRY	3210	400.	0.	0.	0.	0.	0.	400.	0.
BDRY	3210	0.	0.	0.	0.	0.	0.	0.	0.
BDRY	3250	598.	0.	0.	0.	0.	0.	598.	0.
BDRY	3250	0.	-2688.	0.	0.	0.	0.	-2688.	0.
BDRY	3250	0.	0.	-697.	0.	0.	0.	-697.	0.
BDRY	3250	0.	0.	0.	-54562.	0.	0.	0.	-54562.
BDRY	3250	0.	0.	0.	0.	-16711.	0.	0.	-16711.
BDRY	3035	0.	0.	0.	0.	0.	4707.	0.	4707.
BDRY	3083	0.	-6.	0.	0.	0.	0.	-6.	0.
BDRY	3083	0.	0.	-47.	0.	0.	0.	-47.	0.

SUMMARY OF SUPPORT FORCES/MOMENTS IN GLOBAL/LOCAL SYSTEMS

BDRY= BOUNDARY ELEMENTS (SPRING)
 THAM= THERMAL ANCHOR MOTION
 SEAM= SEISMIC ANCHOR MOTION
 SNBR= SNUBBER ELEMENT

LOAD CASE 9 GROUP 3 Z EXCITATION

KIND OF SUPPORT	NODE NUMBER	FX	FY	GLOBAL COMPONENTS			LOCAL COMPONENTS		
				FZ	MX	MY	MZ	FL	ML
BDRY	7090	-53.	0.	0.	0.	0.	0.	-53.	0.
BDRY	7090	0.	-17.	0.	0.	0.	0.	-17.	0.
BDRY	7090	0.	0.	8.	0.	0.	0.	8.	0.
BDRY	7090	0.	0.	0.	192.	0.	0.	0.	192.
BDRY	7090	0.	0.	0.	0.	-1700.	0.	0.	-1700.
BDRY	3047	0.	0.	0.	0.	0.	-2448.	0.	-2448.
BDRY	3116	0.	0.	0.	0.	0.	0.	0.	0.
BDRY	3210	15.	0.	0.	0.	0.	0.	15.	0.
BDRY	3210	0.	0.	0.	0.	0.	0.	0.	0.
BDRY	3250	98.	0.	0.	0.	0.	0.	98.	0.
BDRY	3250	0.	-384.	0.	0.	0.	0.	-384.	0.
BDRY	3250	0.	0.	-1004.	0.	0.	0.	-1004.	0.
BDRY	3250	0.	0.	0.	-2514.	0.	0.	0.	-2514.
BDRY	3250	0.	0.	0.	0.	-903.	0.	0.	-903.
BDRY	3035	0.	7.	0.	0.	0.	293.	0.	293.
BDRY	3083	0.	0.	17.	0.	0.	0.	17.	0.

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STATIC SOLUTION TIME LOG

EQUATION SOLUTION = .00
 DISPLACEMENT OUTPUT = .00
 STRESS RECOVERY = .00

BENCHMARK PROBLEM 2

TOTAL RESPONSE.

***** FINAL RESULTS - SRSS COMBINATION OF DYNAMIC RESPONSES WITH HIGH FREQUENCY MODE RESPONSES *****
 MODAL COMBINATION METHOD 2-GROUPING

NODE NUMBER	DISPLACEMENTS / ROTATIONS						ACCELERATIONS IN G'S		
	X- TRANSLATION	Y- TRANSLATION	Z- TRANSLATION	X- ROTATION	Y- ROTATION	Z- ROTATION	X- DIRECTION	Y- DIRECTION	Z- DIRECTION
7090	.11117E-06	.14830E-06	.65791E-07	.80813E-07	.69584E-07	.83295E-07	.000	.000	.000
3001	.16461E-03	.22910E-03	.16213E-03	.11476E-04	.95343E-05	.10169E-04	.004	.005	.005
3005	.23558E-03	.32607E-03	.24629E-03	.20280E-04	.16867E-04	.16926E-04	.006	.007	.007
3010	.35575E-03	.48912E-03	.39608E-03	.37036E-04	.30828E-04	.28937E-04	.009	.011	.010
3011	.63085E-03	.86102E-03	.75640E-03	.83553E-04	.69520E-04	.59545E-04	.016	.019	.018
3012	.13769E-02	.18265E-02	.18747E-02	.15764E-03	.13114E-03	.10182E-03	.033	.041	.040
3019	.37432E-02	.51128E-02	.62537E-02	.30704E-03	.24812E-03	.15604E-03	.087	.119	.122
3021	.55155E-02	.85825E-02	.11375E-01	.43448E-03	.32989E-03	.16658E-03	.127	.214	.223
3023	.57287E-02	.91512E-02	.12295E-01	.45700E-03	.34290E-03	.16591E-03	.132	.231	.243
3024	.66907E-02	.11493E-01	.15933E-01	.55999E-03	.39682E-03	.16096E-03	.153	.311	.337
3026	.80658E-02	.13446E-01	.23476E-01	.68281E-03	.44822E-03	.18523E-03	.179	.400	.457
3028	.96171E-02	.13888E-01	.30720E-01	.80330E-03	.48479E-03	.28463E-03	.205	.472	.575
3030	.12524E-01	.11284E-01	.44014E-01	.10054E-02	.51686E-03	.61005E-03	.243	.543	.759
3032	.15530E-01	.18773E-01	.57561E-01	.12054E-02	.51821E-03	.10893E-02	.272	.557	.906
3035	.18418E-01	.49103E-01	.70552E-01	.14069E-02	.50136E-03	.17083E-02	.290	.574	1.014
3037	.21050E-01	.10024E+00	.82433E-01	.16141E-02	.48291E-03	.23478E-02	.299	.697	1.083
3038	.23364E-01	.16733E+00	.92928E-01	.18258E-02	.48169E-03	.28932E-02	.303	.900	1.118
3040	.25355E-01	.24755E+00	.10212E+00	.20398E-02	.51180E-03	.33527E-02	.302	1.129	1.119
3044	.26073E-01	.28234E+00	.10547E+00	.21250E-02	.53326E-03	.35131E-02	.298	1.219	1.111
3047	.26403E-01	.29990E+00	.10707E+00	.21667E-02	.54556E-03	.35873E-02	.296	1.262	1.104
3050	.26711E-01	.31638E+00	.10852E+00	.22053E-02	.55789E-03	.36535E-02	.293	1.300	1.097
3053	.27009E-01	.33100E+00	.10958E+00	.22390E-02	.56952E-03	.37097E-02	.291	1.333	1.089
3056	.27845E-01	.35527E+00	.10989E+00	.22940E-02	.59090E-03	.37988E-02	.288	1.385	1.067
3059	.28111E-01	.35967E+00	.10970E+00	.23040E-02	.59512E-03	.38145E-02	.287	1.393	1.061
3062	.29852E-01	.37748E+00	.10825E+00	.23442E-02	.61320E-03	.38773E-02	.286	1.429	1.033
3065	.37399E-01	.41062E+00	.10283E+00	.24192E-02	.65094E-03	.39903E-02	.287	1.490	.966
3068	.44692E-01	.42718E+00	.98167E-01	.24576E-02	.67283E-03	.40472E-02	.291	1.518	.921
3071	.67208E-01	.46069E+00	.84979E-01	.25389E-02	.72340E-03	.41633E-02	.311	1.570	.811
3074	.72731E-01	.46631E+00	.81772E-01	.25538E-02	.73358E-03	.41842E-02	.317	1.578	.788
3077	.78537E-01	.47184E+00	.78421E-01	.25687E-02	.74396E-03	.42052E-02	.324	1.586	.765
3080	.16563E+00	.52683E+00	.28748E-01	.27444E-02	.87874E-03	.44403E-02	.464	1.657	.512
3083	.22410E+00	.53679E+00	.13420E-01	.28336E-02	.95491E-03	.45530E-02	.572	1.670	.463
3086	.24083E+00	.53680E+00	.21918E-01	.28576E-02	.97583E-03	.45830E-02	.604	1.671	.468
3089	.28579E+00	.53682E+00	.48970E-01	.29169E-02	.10324E-02	.46605E-02	.687	1.673	.514
3092	.37247E+00	.53683E+00	.10332E+00	.30116E-02	.11421E-02	.47996E-02	.839	1.678	.686
3095	.43000E+00	.53685E+00	.13959E+00	.30615E-02	.12149E-02	.48846E-02	.933	1.682	.823
3098	.43883E+00	.53685E+00	.14515E+00	.30683E-02	.12260E-02	.48972E-02	.947	1.682	.844
3100	.54052E+00	.53686E+00	.20905E+00	.31324E-02	.13541E-02	.50349E-02	1.098	1.687	1.093
3101	.64490E+00	.53687E+00	.27398E+00	.31739E-02	.14841E-02	.51650E-02	1.242	1.692	1.341
3104	.64878E+00	.53687E+00	.27638E+00	.31750E-02	.14889E-02	.51697E-02	1.247	1.693	1.350
3107	.70534E+00	.53686E+00	.31115E+00	.31885E-02	.15586E-02	.52370E-02	1.324	1.695	1.480
3110	.79083E+00	.52937E+00	.36366E+00	.32003E-02	.16619E-02	.53377E-02	1.441	1.696	1.653
3113	.86648E+00	.49978E+00	.41134E+00	.32044E-02	.17521E-02	.54354E-02	1.548	1.683	1.744
3115	.96657E+00	.41571E+00	.47778E+00	.32031E-02	.18784E-02	.56048E-02	1.695	1.635	1.747
3116	.10262E+01	.27405E+00	.52840E+00	.31970E-02	.19969E-02	.58280E-02	1.784	1.544	1.545
3119	.10258E+01	.20534E+00	.53890E+00	.31941E-02	.20437E-02	.59392E-02	1.785	1.498	1.408
3120	.10253E+01	.14170E+00	.55408E+00	.31920E-02	.20923E-02	.60784E-02	1.787	1.449	1.291
3122	.10247E+01	.14707E+00	.57139E+00	.31917E-02	.21292E-02	.62145E-02	1.788	1.418	1.266
3123	.10034E+01	.25125E+00	.58781E+00	.31935E-02	.21623E-02	.63885E-02	1.762	1.417	1.365
3125	.92304E+00	.36167E+00	.57556E+00	.31923E-02	.21837E-02	.65263E-02	1.657	1.457	1.518
3128	.78518E+00	.44493E+00	.53560E+00	.31762E-02	.22014E-02	.66218E-02	1.473	1.509	1.657
3198	.63942E+00	.46241E+00	.48078E+00	.31371E-02	.22142E-02	.66414E-02	1.263	1.523	1.671
3199	.50712E+00	.44221E+00	.42444E+00	.30744E-02	.22240E-02	.65971E-02	1.052	1.504	1.610
3200	.37614E+00	.42214E+00	.37151E+00	.29866E-02	.22328E-02	.64896E-02	.819	1.481	1.572
3205	.24383E+00	.40161E+00	.32199E+00	.28676E-02	.22395E-02	.63100E-02	.558	1.453	1.564
3208	.11941E+00	.38230E+00	.28086E+00	.27236E-02	.22424E-02	.60676E-02	.292	1.420	1.593
3210	.24582E-02	.36375E+00	.24886E+00	.25513E-02	.22410E-02	.57586E-02	.142	1.380	1.659
3212	.11918E+00	.32990E+00	.22159E+00	.23272E-02	.22374E-02	.53463E-02	.449	1.288	1.731

3215	.19572E+00	.25386E+00	.19192E+00	.20682E-02	.22268E-02	.48831E-02	.694	1.049	1.683
3220	.22634E+00	.14858E+00	.15747E+00	.17423E-02	.21533E-02	.42660E-02	.792	.697	1.533
3222	.18473E+00	.32364E-01	.10954E+00	.13538E-02	.18632E-02	.32805E-02	.658	.350	1.237
3225	.11777E+00	.21990E-01	.73898E-01	.11703E-02	.15016E-02	.25050E-02	.511	.311	.945
3230	.10222E+00	.21451E-01	.66421E-01	.11312E-02	.14097E-02	.23267E-02	.484	.308	.866
3235	.59004E-01	.17902E-01	.44555E-01	.99271E-03	.11172E-02	.17859E-02	.402	.293	.607
3237	.26813E-01	.16422E-01	.25668E-01	.83293E-03	.83982E-03	.13223E-02	.310	.274	.366
3238	.10712E-01	.15069E-01	.14080E-01	.57427E-02	.53605E-03	.64381E-03	.231	.247	.210
3240	.37883E-02	.10544E-01	.57427E-02	.53605E-03	.44841E-03	.73656E-03	.141	.177	.091
3243	.22993E-02	.49653E-02	.12794E-02	.35035E-03	.26293E-03	.44463E-03	.060	.089	.022
3245	.58147E-03	.88996E-03	.46287E-04	.13461E-03	.92060E-04	.15511E-03	.011	.019	.001
3250	.11833E-06	.18937E-06	.11691E-06	.11815E-06	.80280E-07	.10043E-06	.000	.000	.000

***** FINAL RESULTS - SPSS COMBINATION OF DYNAMIC RESPONSES WITH HIGH FREQUENCY MODE RESPONSES *****
 MODAL COMBINATION METHOD 2-GROUPING

PIPE FORCES AND MOMENTS

ELEMENT NUMBER	ELEMENT TYPE	STATION	AXIAL FORCE	Y-AXIS SHEAR	Z-AXIS SHEAR	TORSIONAL MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
1	TANGENT	END-I	12618.502	13840.188	6044.873	275586.80	859583.17	1008578.27
		END-J	12618.502	13840.188	6044.873	275586.80	770649.98	754039.87
2	TANGENT	END-I	12536.869	13808.639	6007.240	275602.42	770619.79	754065.06
		END-J	12536.869	13808.639	6007.240	275602.42	750306.48	693636.71
3	TANGENT	END-I	12407.341	13758.436	5947.721	275602.42	750306.48	693636.71
		END-J	12407.341	13758.436	5947.721	275602.42	730467.18	633600.96
4	TANGENT	END-I	12323.136	13738.608	5889.584	278132.79	731042.61	631827.35
		END-J	12323.136	13738.608	5889.584	278132.79	708967.41	563853.70
5	TANGENT	END-I	12240.366	13702.195	5858.635	277261.72	708853.36	564426.13
		END-J	12240.366	13702.195	5858.635	277261.72	673365.74	452326.40
6	BEND	END-I	12071.360	13131.358	6837.638	276627.47	692946.85	420973.05
		CENTER	11734.428	13432.216	6837.638	311934.50	630267.25	314969.55
		END-J	11426.970	13694.691	6837.638	350680.77	564649.66	221151.67
7	BEND	END-I	10807.665	13857.654	6946.180	404516.06	524458.03	228058.45
		CENTER	10643.456	13984.152	6946.180	436318.53	463289.62	176129.76
		END-J	10537.132	14064.367	6946.180	463927.93	405499.25	183998.34
8	BEND	END-I	10352.559	13564.955	7853.616	494412.89	354266.37	208727.68
		CENTER	10353.398	13564.636	7853.616	497944.76	346461.47	213049.79
		END-J	10356.016	13562.961	7853.616	501300.69	339185.07	218856.57
9	TANGENT	END-I	10237.410	14642.160	5525.818	505323.39	360182.96	170758.71
		END-J	10237.410	14642.160	5525.818	505323.39	300314.59	350473.74
10	TANGENT	END-I	10017.164	14619.503	5388.349	505203.53	300314.59	350646.53
		END-J	10017.164	14619.503	5388.349	505203.53	236618.35	576198.64
11	TANGENT	END-I	9783.505	14596.294	5181.646	505203.53	236618.35	576198.64
		END-J	9783.505	14596.294	5181.646	505203.53	190001.54	803006.56
12	TANGENT	END-I	9480.433	14573.475	4829.347	505424.88	190001.54	802867.41
		END-J	9480.433	14573.475	4829.347	505424.88	174683.39	1190785.65
13	TANGENT	END-I	9119.840	14578.618	4244.335	505673.13	174683.39	1190680.38
		END-J	9119.840	14578.618	4244.335	505673.13	226821.55	1578679.03
14	TANGENT	END-I	8785.509	14649.931	3565.789	505449.60	226821.55	1578750.61
		END-J	8785.509	14649.931	3565.789	505449.60	294317.86	1968362.42
15	TANGENT	END-I	8481.478	13757.114	2859.397	505385.82	294317.86	1968378.73
		END-J	8481.478	13757.114	2859.397	505385.82	352576.41	1693419.90
16	TANGENT	END-I	8210.707	13296.324	2233.868	505678.12	352576.41	1693332.78
		END-J	8210.707	13296.324	2233.868	505678.12	393890.20	1462633.78
17	TANGENT	END-I	7975.063	12633.913	1884.133	505480.17	393890.20	12702.22
		END-J	7975.063	12633.913	1884.133	505480.17	416774.07	1291521.02
18	TANGENT	END-I	7833.912	12022.428	1900.087	505725.27	416774.07	1291425.02
		END-J	7833.912	12022.428	1900.087	505725.27	421105.11	1243111.85
19	TANGENT	END-I	7777.114	11741.547	1990.999	503785.63	421105.11	1243899.61

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		END-J	7777.114	11741.547	1990.999	503785.63	422418.23	1224487.07
20	TANGENT	END-I	7751.085	11557.727	2048.761	505575.98	422418.23	1223748.47
		END-J	7751.085	11557.727	2048.761	505575.98	423237.63	1208309.67
21	BEND	END-I	7723.887	11386.955	2115.790	505844.97	423237.63	1208196.95
		CENTER	7828.259	11315.424	2115.790	504944.35	424472.29	1202073.75
		END-J	7935.606	11240.333	2115.790	503965.41	425837.22	1196130.92
22	BEND	END-I	8044.237	10931.370	2154.094	502640.46	429833.62	1195267.03
		CENTER	8225.246	10795.801	2154.094	501111.21	430875.33	1185547.04
		END-J	8410.649	10652.046	2154.094	499385.42	432266.98	1176221.86
23	BEND	END-I	8577.596	8615.031	6111.918	499018.73	739926.57	1011530.45
		CENTER	8604.637	8588.080	6111.918	497661.94	740529.57	1009606.81
		END-J	8631.567	8560.977	6111.918	496341.42	741116.83	1007689.92
24	BEND	END-I	8707.840	10048.937	2356.776	496038.07	442029.73	1170324.94
		CENTER	8841.420	9931.502	2356.776	494775.85	442115.45	1163065.50
		END-J	8974.791	9811.103	2356.776	493414.55	442407.37	1155934.04
25	BEND	END-I	9017.359	9402.075	2490.361	489831.62	443261.66	1157114.81
		CENTER	9248.978	9174.382	2490.361	485740.01	446008.40	1142463.31
		END-J	9474.698	8941.332	2490.361	481455.60	449160.84	1128021.11
26	BEND	END-I	9583.025	8348.325	2823.695	478620.58	482514.75	1115376.86
		CENTER	9683.177	8232.066	2823.695	475581.78	484046.65	1106978.20
		END-J	9780.267	8116.573	2823.695	472592.68	485554.77	1098567.68
27	BEND	END-I	9676.873	7820.482	2824.775	469607.02	455996.15	1112464.43
		CENTER	9848.826	7602.718	2824.775	464487.53	458289.69	1093026.94
		END-J	10003.688	7397.620	2824.775	459231.42	461189.49	1073213.31
28	BEND	END-I	9965.094	6720.944	3583.047	450738.51	532012.55	1043672.46
		CENTER	9983.867	6692.865	3583.047	450001.62	532053.91	1039400.72
		END-J	10002.078	6665.758	3583.047	449268.94	532130.78	1035102.06
29	BEND	END-I	9931.329	6885.410	3086.753	449603.77	500100.26	1050733.32
		CENTER	9948.409	6860.642	3086.753	448474.72	500134.74	1046615.22
		END-J	9964.727	6836.783	3086.753	447363.27	500165.52	1042478.31
30	BEND	END-I	9488.956	5047.992	3283.748	435479.75	472881.20	1055968.46
		CENTER	9555.080	6551.710	3283.748	433579.15	478212.23	999339.58
		END-J	9523.896	6596.772	3283.748	422743.70	486172.78	979413.51
31	BEND	END-I	8406.791	6831.635	3559.213	412383.34	496598.10	938565.26
		CENTER	8273.070	6993.719	3559.213	409381.64	500765.89	901847.97
		END-J	8123.574	7167.446	3559.213	407359.57	505337.92	865196.99
32	TANGENT	END-I	7499.681	5740.631	7211.368	406468.05	843843.10	540876.17
		END-J	7499.681	5740.631	7211.368	406458.05	823065.78	523625.90
33	TANGENT	END-I	7174.214	5699.630	7181.538	406458.52	823068.55	523625.90
		END-J	7174.214	5699.630	7181.538	406458.52	770369.65	479221.05
34	TANGENT	END-I	6543.486	5526.508	7105.039	406577.26	770308.20	479221.05
		END-J	6543.486	5526.508	7105.039	406577.26	682429.93	404755.50
35	TANGENT	END-I	5899.643	5242.254	6986.971	406448.88	682505.92	404755.50
		END-J	5899.643	5242.254	6986.971	406448.88	636265.84	364088.34
36	TANGENT	END-I	5636.646	5072.638	6925.266	406824.47	636026.54	364088.34
		END-J	5636.646	5072.638	6925.266	406824.47	629877.54	358538.54
37	TANGENT	END-I	5221.078	4813.917	6834.760	406577.18	630036.85	358538.54
		END-J	5221.078	4813.917	6834.760	406577.18	579239.97	307052.86

38	TANGENT	END-I END-J	4612.865 4612.865	4183.447 4183.447	6638.969 6638.969	406667.15 406667.15	579176.88 568736.30	307052.86 276378.61
39	TANGENT	END-I END-J	4474.828 4474.828	3690.079 3690.079	6533.078 6533.078	413964.47 413964.47	563446.61 563839.60	276378.61 275633.06
40	TANGENT	END-I END-J	4295.933 4295.933	3589.625 3589.625	6486.886 6486.886	406959.90 406959.90	568916.55 581499.11	275633.06 265872.36
41	BEND	END-I CENTER END-J	4170.687 4259.419 4388.230	6410.568 6352.130 6263.724	3082.330 3082.330 3082.330	406779.50 391486.47 373867.43	266546.04 280337.31 297869.63	581325.29 599585.44 620907.35
42	BEND	END-I CENTER END-J	4826.356 5034.765 5244.546	5872.921 5695.451 5502.716	2630.073 2630.073 2630.073	347679.27 327572.77 306587.16	326785.86 339307.30 351933.70	621579.11 643447.43 665736.00
43	BEND	END-I CENTER END-J	6054.359 6330.015 6540.065	4920.276 4560.073 4253.465	2375.688 2375.688 2375.688	278004.70 243694.35 212712.63	376128.63 380820.77 381999.97	665056.52 693930.15 718356.92
44	BEND	END-I CENTER END-J	7504.505 7408.746 7176.019	4052.095 4224.494 4608.656	2761.137 2761.137 2761.137	181723.52 168071.09 169446.78	396078.73 366071.46 331052.56	719240.29 717714.84 705776.35
45	TANGENT	END-I END-J	7254.255 7254.255	6112.898 6112.898	3146.196 3146.196	187833.76 187833.76	304619.27 267230.90	712999.68 669580.27
46	TANGENT	END-I END-J	7786.452 7786.452	6735.281 6735.281	3468.294 3468.294	187961.89 187961.89	267230.90 217017.28	669544.30 619875.21
47	TANGENT	END-I END-J	8477.560 8477.560	7424.849 7424.849	3768.381 3768.381	187966.74 187966.74	217017.28 171344.68	619873.83 587104.70
48	BEND	END-I CENTER END-J	9387.113 8859.191 8300.658	8374.262 8930.808 9452.231	3720.164 3720.164 3720.164	187956.95 184068.28 174938.48	158251.83 143849.32 153702.49	590777.54 578334.42 572684.06
49	BEND	END-I CENTER END-J	8821.431 8402.750 8068.289	10809.246 11138.081 11383.005	3891.654 3891.654 3891.654	158266.81 144217.01 127918.22	170932.85 198393.40 233235.20	572650.43 561171.07 566385.40
50	BEND	END-I CENTER END-J	9181.161 9090.783 9143.065	12240.302 12307.458 12268.637	4131.286 4131.286 4131.286	109251.53 100758.95 105737.78	246467.24 280030.16 313539.91	564686.12 571576.83 602873.77
51	BEND	END-I CENTER END-J	10542.795 10728.305 10971.645	12791.866 12636.553 12426.070	4409.343 4409.343 4409.343	132977.75 159392.63 191586.29	298446.98 314195.40 328840.10	605138.50 627635.65 665168.87
52	TANGENT	END-I END-J	12058.618 12058.618	12252.010 12252.010	6267.074 6267.074	235085.82 235085.82	165625.85 245423.24	710321.72 791840.73
53	TANGENT	END-I END-J	12773.852 12773.852	12821.221 12821.221	6838.700 6838.700	234828.80 234828.80	245089.19 359587.97	792019.33 931386.13
54	TANGENT	END-I END-J	13526.407 13526.407	13298.537 13298.537	7387.480 7387.480	235308.42 235308.42	359266.02 497215.65	931389.42 1119872.85
55	TANGENT	END-I END-J	14300.501 14300.501	13655.477 13655.477	7915.733 7915.733	235075.47 235075.47	496937.85 644406.37	1120045.04 1333341.13
56	TANGENT	END-I END-J	15081.734 15081.734	13875.317 13875.317	8448.729 8448.729	235023.75 235023.75	644425.15 803238.34	1333341.13 1566280.93

57	BEND	END-I	14290.227	15886.783	7743.477	235490.20	726910.83	1603061.85
		CENTER	12754.957	17143.773	7743.477	312867.78	772056.24	1662721.12
		END-J	11186.112	18206.364	7743.477	399195.00	809594.39	1735847.51
58	BEND	END-I	8616.199	20085.515	8469.613	587537.99	685316.45	1735830.24
		CENTER	7667.401	20466.604	8469.613	662630.51	696427.14	1807292.70
		END-J	7283.992	20675.157	8469.613	737938.63	702943.87	1894002.57
59	BEND	END-I	8281.216	20546.707	9222.665	881260.62	511605.90	1894087.90
		CENTER	9754.988	19889.659	9222.665	940353.66	509440.98	1987848.06
		END-J	11504.616	18930.815	9222.665	995858.40	509866.34	2090828.49
60	BEND	END-I	14863.769	16638.794	9952.804	1073506.77	329591.75	2088591.41
		CENTER	17206.954	14202.250	9952.804	1096183.75	366665.62	2182575.36
		END-J	19090.490	11547.074	9952.804	1111021.57	417242.02	2253935.70
61	BEND	END-I	20927.606	7302.230	10597.367	1058208.71	536163.83	2254197.99
		CENTER	21008.114	7067.403	10597.367	1010925.82	581475.84	2200925.58
		END-J	20668.218	8006.984	10597.367	965707.61	618046.92	2118043.43
62	BEND	END-I	18573.880	11915.405	10923.850	839783.98	770908.38	2121589.31
		CENTER	18232.138	12431.908	10923.850	823594.47	769321.69	2082726.19
		END-J	17870.452	12946.349	10923.850	808202.12	766924.68	2042533.10
63	TANGENT	END-I	17033.394	13299.269	11933.194	772803.31	908193.49	1997807.47
		END-J	17033.394	13299.269	11933.194	772803.31	782871.91	1721941.22
64	TANGENT	END-I	17107.459	13261.900	12112.345	772516.73	779921.25	1723408.25
		END-J	17107.459	13261.900	12112.345	772516.73	737064.57	1455601.35
65	BEND	END-I	17196.547	11494.312	13870.799	772784.11	1484209.71	677309.22
		CENTER	17217.230	11464.387	13870.799	814216.90	1363212.75	692763.27
		END-J	17160.216	11550.534	13870.799	864725.77	1233011.30	717788.82
66	BEND	END-I	16831.388	12183.640	13876.855	987621.65	1137150.53	717478.01
		CENTER	16541.877	12574.425	13876.855	1041156.77	985601.34	747289.58
		END-J	16189.807	13024.834	13876.855	1087437.39	832661.37	786887.88
67	BEND	END-I	15248.708	14217.213	13904.823	1167162.85	716820.59	786725.21
		CENTER	14750.189	14733.365	13904.823	1189329.34	586091.68	831936.71
		END-J	14233.746	15232.153	13904.823	1198297.20	492940.19	878627.55
68	BEND	END-I	13122.514	16304.545	13906.539	1182738.77	528052.40	889300.15
		CENTER	12660.599	16664.892	13906.539	1159788.77	571211.18	951454.14
		END-J	12259.574	16962.126	13906.539	1122524.46	667295.14	1024666.50
69	TANGENT	END-I	11685.876	18922.381	11815.606	1004295.23	749410.88	1088604.53
		END-J	11685.876	18922.381	11815.606	1004295.23	802796.02	1181473.85

***** FINAL RESULTS - SRSS COMBINATION OF DYNAMIC RESPONSES WITH HIGH FREQUENCY MODE RESPONSES *****
 MODAL COMBINATION METHOD 2-GROUPING

SUPPORT FORCES AND MOMENTS

NODE NUMBER	COMPONENT DIRECTION	FORCE/MOMENT (LOCAL)
7090	FX	11117.
7090	FY	14830.
7090	FZ	6579.
7090	MX	808136.
7090	MY	695844.
7090	MZ	832961.
3047	FZ	64.
3116	FZ	317.
3210	FX	12291.
3210	FZ	149.
3250	FX	11833.
3250	FY	18937.
3250	FZ	11691.
3250	MX	1181474.
3250	MY	802796.
3250	MZ	1004295.
3035	FY	27081.
3083	FZ	7401.

BENCHMARK PROBLEM 3
MODAL SUPERPOSITION TIME HISTORY ANALYSIS

AP600 MAIN STEAM LINE BENCHMARK ANALYSIS - MODAL SUP TIME HISTORY METHOD

CONTROL INFORMATION

NUMBER OF NODAL POINTS = 96
 NUMBER OF ELEMENT TYPES = 3
 NUMBER OF STATIC LOAD CASES = 0
 NUMBER OF DYNAMIC LOAD CASES = 1
 NUMBER OF ANCHOR MVMT CASES = 0
 NUMBER OF FREQUENCIES = 50
 SOLUTION MODE (MODEX) = 0
 EQ.0, EXECUTION
 EQ.1, DATA CHECK
 STRESS CALCULATION FLAG = 0
 EQ.0 NO
 EQ.1 YES
 ASME CODE EVALUATION FLAG = 0
 EQ.1 CLASS 1 PIPING
 EQ.2 CLASS2 OR CLASS 3 PIPING
 ACCELERATION DUE TO GRAVITY = 386.4
 BANDWIDTH MINIMIZATION FLAG = 0
 EQ.0 NO
 EQ.1 YES
 ARBITRARY NODE NUMBERING FLAG = 1
 EQ.0 NO
 EQ.1 YES
 NUMBER OF SUPPORT GROUPS = 0
 FLAG FOR NODAL COORD. INPUT UNITS = 1
 EQ.0 CONSISTENT UNIT
 EQ.1 FEET TO INCHES

A-219

LIST OF ANALYSIS TO BE PERFORMED

LOAD CASE	DISK FILE	ANALYSIS TYPE
1	0	UNIFORM TIME HISTORY ANALYSIS

NODAL POINT INPUT DATA

NEW NODE	OLD NODE	BOUNDARY CONDITION CODES						NODAL POINT COORDINATES			
		X	Y	Z	XX	YY	ZZ	X	Y	Z	T
1	101	0	0	0	0	0	0	11910.000	11641.200	2095.368	520.000
2	9001	0	0	0	0	0	0	11933.760	11656.236	2163.252	520.000
3	110	0	0	0	0	0	0	11991.132	11692.524	2191.368	520.000
4	120	0	0	0	0	0	0	12001.272	11698.932	2191.368	520.000
5	130	0	0	0	0	0	0	12013.944	11706.948	2191.368	520.000
6	140	0	0	0	0	0	0	12062.856	11737.884	2191.368	520.000
7	9002	0	0	0	0	0	0	12120.228	11774.160	2163.252	520.000
8	150	0	0	0	0	0	0	12143.988	11789.196	2095.368	520.000
9	9003	0	0	0	0	0	0	12143.988	11789.196	2011.848	520.000
10	9004	0	0	0	0	0	0	12143.988	11789.196	1933.728	520.000
11	6020	0	0	0	0	0	0	12143.988	11789.196	1860.996	520.000
12	9005	0	0	0	0	0	0	12143.988	11789.196	1788.996	520.000
13	9006	0	0	0	0	0	0	12143.988	11789.196	1716.996	520.000
14	6040	0	0	0	0	0	0	12143.988	11789.196	1644.996	520.000
15	160	0	0	0	0	0	0	12143.988	11789.196	1630.680	520.000
16	9007	0	0	0	0	0	0	12172.104	11789.196	1562.796	520.000
17	170	0	0	0	0	0	0	12239.988	11789.196	1534.680	520.000
18	6050	0	0	0	0	0	0	12263.988	11789.196	1534.680	520.000
19	6060	0	0	0	0	0	0	12275.988	11789.196	1534.680	520.000
20	9008	0	0	0	0	0	0	12344.988	11789.196	1534.680	520.000
21	9009	0	0	0	0	0	0	12413.988	11789.196	1534.680	520.000
22	9010	0	0	0	0	0	0	12482.988	11789.196	1534.680	520.000
23	6070	0	0	0	0	0	0	12551.988	11789.196	1534.680	520.000
24	6080	0	0	0	0	0	0	12599.988	11789.196	1534.680	520.000
25	9011	0	0	0	0	0	0	12661.992	11739.196	1534.680	520.000
26	180	0	0	0	0	0	0	12731.988	11789.196	1534.680	520.000
27	9012	0	0	0	0	0	0	12779.988	11789.196	1534.680	520.000
28	9013	0	0	0	0	0	0	12827.988	11789.196	1534.680	520.000
29	6090	0	0	0	0	0	0	12867.984	11789.196	1534.680	520.000
30	6091	0	0	0	0	0	0	12878.988	11789.196	1534.680	520.000
31	190	0	0	0	0	0	0	12898.992	11789.196	1534.680	520.000
32	200	0	0	0	0	0	0	12907.992	11789.196	1534.680	520.000
33	210	0	0	0	0	0	0	12916.992	11789.196	1534.680	520.000
34	220	0	0	0	0	0	0	12925.992	11789.196	1534.680	520.000
35	230	0	0	0	0	0	0	12934.992	11789.196	1534.680	520.000
36	239	0	0	0	0	0	0	12978.996	11789.196	1534.680	520.000
37	240	0	0	0	0	0	0	12996.996	11789.196	1534.680	520.000
38	250	0	0	0	0	0	0	13035.996	11789.196	1534.680	520.000
39	260	0	0	0	0	0	0	13074.996	11789.196	1534.680	520.000
40	261	0	0	0	0	0	0	13092.996	11789.196	1534.680	520.000
41	9014	0	0	0	0	0	0	13149.996	11789.196	1534.680	520.000
42	280	0	0	0	0	0	0	13206.996	11789.196	1534.680	520.000
43	290	0	0	0	0	0	0	13225.992	11789.196	1534.680	520.000
44	291	0	0	0	0	0	0	13234.992	11789.196	1534.680	520.000
45	300	0	0	0	0	0	0	13246.992	11789.196	1534.680	520.000
46	310	0	0	0	0	0	0	13278.996	11789.196	1534.680	520.000
47	315	0	0	0	0	0	0	13278.996	11789.196	1606.680	520.000
48	320	0	0	0	0	0	0	13311.000	11789.196	1534.680	520.000
49	330	0	0	0	0	0	0	13329.996	11789.196	1534.680	520.000
50	340	0	0	0	0	0	0	13350.000	11789.196	1534.680	520.000
51	1000	0	0	0	0	0	0	12996.996	11789.196	1550.676	520.000
52	1002	0	0	0	0	0	0	12996.996	11789.196	1553.676	520.000
53	1003	0	0	0	0	0	0	12996.996	11789.196	1559.676	520.000
54	1010	0	0	0	0	0	0	12996.996	11789.196	1566.312	520.000
55	1020	0	0	0	0	0	0	12996.996	11789.196	1583.064	520.000
56	1025	0	0	0	0	0	0	12996.996	11789.196	1600.068	520.000
57	1040	0	0	0	0	0	0	12996.996	11799.948	1583.064	70.000
58	1050	0	0	0	0	0	0	12996.996	11804.556	1583.064	70.000
59	1060	0	0	0	0	0	0	12996.996	11819.556	1598.064	70.000
60	1070	0	0	0	0	0	0	12996.996	11819.556	1608.060	70.000
61	1080	0	0	0	0	0	0	12996.996	11778.444	1583.904	70.000
62	1090	0	0	0	0	0	0	12996.996	11773.836	1583.904	70.000

63	1100	0	0	0	0	0	0	12996.996	11758.836	1598.064	70.000
64	1110	0	0	0	0	0	0	12996.996	11758.836	1608.060	70.000
65	1120	0	0	0	0	0	0	13035.996	11789.196	1550.676	520.000
66	1122	0	0	0	0	0	0	13035.996	11789.196	1553.676	520.000
67	1123	0	0	0	0	0	0	13035.996	11789.196	1559.676	520.000
68	1130	0	0	0	0	0	0	13035.996	11789.196	1566.312	520.000
69	1140	0	0	0	0	0	0	13035.996	11789.196	1583.064	520.000
70	1145	0	0	0	0	0	0	13035.996	11789.196	1600.068	520.000
71	1160	0	0	0	0	0	0	13035.996	11789.196	1583.064	70.000
72	1170	0	0	0	0	0	0	13035.996	11819.556	1583.064	70.000
73	1180	0	0	0	0	0	0	13035.996	11819.556	1598.064	70.000
74	1190	0	0	0	0	0	0	13035.996	11819.556	1608.060	70.000
75	1200	0	0	0	0	0	0	13035.996	11778.444	1583.064	70.000
76	1210	0	0	0	0	0	0	13035.996	11773.836	1583.064	70.000
77	1220	0	0	0	0	0	0	13035.996	11758.836	1598.064	70.000
78	1230	0	0	0	0	0	0	13035.996	11758.836	1608.060	70.000
79	1240	0	0	0	0	0	0	13074.996	11789.196	1550.676	520.000
80	1242	0	0	0	0	0	0	13074.996	11789.196	1553.676	520.000
81	1243	0	0	0	0	0	0	13074.996	11789.196	1559.676	520.000
82	1250	0	0	0	0	0	0	13074.996	11789.196	1566.312	520.000
83	1260	0	0	0	0	0	0	13074.996	11789.196	1583.064	520.000
84	1265	0	0	0	0	0	0	13074.996	11789.196	1600.068	520.000
85	1280	0	0	0	0	0	0	13074.996	11799.948	1583.064	70.000
86	1290	0	0	0	0	0	0	13074.996	11804.556	1583.064	70.000
87	1300	0	0	0	0	0	0	13074.996	11819.556	1598.064	70.000
88	1310	0	0	0	0	0	0	13074.996	11819.556	1608.060	70.000
89	1320	0	0	0	0	0	0	13074.996	11778.444	1583.064	70.000
90	1330	0	0	0	0	0	0	13074.996	11773.836	1583.064	70.000
91	1340	0	0	0	0	0	0	13074.996	11758.836	1598.064	70.000
92	1350	0	0	0	0	0	0	13074.996	11758.836	1608.060	70.000
93	4000	0	0	0	0	0	0	13225.992	11789.196	1518.684	520.000
94	4010	0	0	0	0	0	0	13225.992	11789.196	1515.432	520.000
95	4020	0	0	0	0	0	0	13225.992	11789.196	1496.496	520.000
96	4030	0	0	0	0	0	0	13225.992	11789.196	1489.500	520.000

SPRING ELEMENTS

ELEMENT TYPE = 1
 NUMBER OF ELEMENTS = 20

ELEMENT LOAD CASE MULTIPLIERS

CASE (A) CASE (B) CASE (C) CASE (D)
 1.0000 1.0000 1.0000 1.0000

ELEMENT NUMBER	NODE (N)	SUPPORT GROUP	CODE KD	CODE KR	DIRECTION COSINES WRT GLOBAL AXES	SPECIFIED DISPLACEMENT	SPECIFIED ROTATION	SPRING RATE
					X- Y- Z-			
1	101	1	1	0	1.000 .000 .000	.000	.000	1.0000E+11
2	101	1	1	0	.000 1.000 .000	.000	.000	1.0000E+11
3	101	1	1	0	.000 .000 1.000	.000	.000	1.0000E+11
4	101	1	0	1	1.000 .000 .000	.000	.000	1.0000E+13
5	101	1	0	1	.000 1.000 .000	.000	.000	1.0000E+13
6	101	1	0	1	.000 .000 1.000	.000	.000	1.0000E+13
7	6020	1	1	0	-.476 .880 .000	.000	.000	5.0000E+06
8	6040	1	1	0	.000 .000 .000	.000	.000	5.0000E+06
9	6060	1	1	0	.000 .000 .000	.000	.000	1.0000E+00
10	6070	1	1	0	.000 .000 .000	.000	.000	1.0000E+00
11	6090	1	1	0	.000 .000 .000	.000	.000	5.0000E+06
12	6090	1	1	0	.000 .000 .000	.000	.000	5.0000E+06
13	239	1	1	0	.000 .000 .000	.000	.000	1.0000E+06
14	261	1	1	0	.000 .000 .000	.000	.000	5.0000E+06
15	340	1	1	0	.000 .000 .000	.000	.000	5.0000E+06
16	340	1	1	0	1.000 .000 .000	.000	.000	1.2000E+07
17	340	1	1	0	.000 .000 .000	.000	.000	1.2000E+07
18	340	1	0	1	1.000 .000 .000	.000	.000	5.6000E+09
19	340	1	0	1	.000 1.000 .000	.000	.000	5.6000E+09
20	340	1	0	1	.000 .000 1.000	.000	.000	5.6000E+09

S N U B B E R E L E M E N T S

ELEMENT TYPE = 4
 NUMBER OF ELEMENTS = 2

ELEMENT LOAD CASE MULTIPLIERS

CASE (A) CASE (B) CASE (C) CASE (D)
 1.0000 1.0000 1.0000 1.0000

ELEMENT NUMBER	NODE (N)	SUPPORT GROUP	CODE KD	CODE KR	DIRECTION COSINES WRT GLOBAL AXES			SPECIFIED DISPLACEMENT	SPECIFIED ROTATION	SPRING RATE
					X-	Y-	Z-			
1	6020	1	1	0	.880	.476	.000	.000	.000	9.5000E+05
2	6050	1	1	0	.000	.000	1.000	.000	.000	1.5000E+06

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PIPE ELEMENT INPUT DATA

CONTROL INFORMATION

NUMBER OF PIPE ELEMENTS	-	95
NUMBER OF MATERIAL SETS	-	2
MAXIMUM NUMBER OF MATERIAL TEMPERATURE INPUT POINTS	-	3
NUMBER OF SECTION PROPERTY SETS	-	11
NUMBER OF BRANCH POINT NODES	-	8
MAXIMUM NUMBER OF TANGENTS COMMON TO A BRANCH POINT	-	4
FLAG FOR NEGLECTING AXIAL DEFORMATIONS IN BEND ELEMENTS (EQ.1, NEGLECT)	-	0

MATERIAL PROPERTY TABLES

MATERIAL NUMBER = (1)
 NUMBER OF
 TEMPERATURE POINTS = (3)
 IDENTIFICATION = (SA-333 GR 6)

POINT NUMBER	TEMPERATURE	YOUNG'S MODULUS	POISSON'S RATIO	THERMAL EXPANSION
1	70.00	2.950E+07	.300	0.000E+00
2	500.00	2.730E+07	.300	6.910E-06
3	550.00	2.700E+07	.300	7.060E-06

MATERIAL NUMBER = (2)
 NUMBER OF
 TEMPERATURE POINTS = (3)
 IDENTIFICATION = (SA-508 CL 3)

POINT NUMBER	TEMPERATURE	YOUNG'S MODULUS	POISSON'S RATIO	THERMAL EXPANSION
1	70.00	2.920E+07	.300	0.000E+00
2	500.00	2.700E+07	.300	7.250E-06
3	550.00	2.670E+07	.300	7.340E-06

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SECTION PROPERTY TABLE

SECTION NUMBER	OUTSIDE DIAMETER	WALL THICKNESS	SHAPE FACTOR FOR SHEAR	WEIGHT/UNIT LENGTH	MASS/UNIT LENGTH	DESCRIPTION
1	32.000	1.4400	.0000	4.3333E+01	1.1215E-01	32 IN MAIN PIPE
2	32.000	1.8000	.0000	1.1025E+02	2.8533E-01	CONT PENETRATION
3	32.000	1.4400	.0000	4.3333E+01	1.1215E-01	PEN TO MSIV
4	8.625	.9060	.0000	7.5830E+00	1.9625E-02	SV INLET
5	10.750	.5930	.0000	5.4170E+00	1.4019E-02	SV OUTLET
6	12.750	.8440	.0000	1.4217E+01	3.6793E-02	DRAIN LEG
7	32.000	1.4400	.0000	0.0000E+00	0.0000E+00	FICT. SECTION
8	34.880	4.3200	.0000	0.0000E+00	0.0000E+00	MSIV BODY
9	100.000	10.0000	.0000	0.0000E+00	0.0000E+00	RIGID SECTION
10	10.437	2.7180	.0000	0.0000E+00	0.0000E+00	SV BODY 1
11	11.936	1.7790	.0000	0.0000E+00	0.0000E+00	SV BODY 2

BRANCH POINT NODE LIST

BRANCH POINT	NODE NUMBER
1	310
2	240
3	1020
4	250
5	1140
6	260
7	1260
8	290

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ELEMENT LOAD CASE MULTIPLIERS

	CASE A	CASE B	CASE C	CASE D
X-DIRECTION GRAVITY	.000	.000	.000	.000
Y-DIRECTION GRAVITY	.000	.000	.000	.000
Z-DIRECTION GRAVITY	-1.000	.000	.000	.000
THERMAL DISTORTION	.000	.000	.000	.000
PRESSURE DISTORTION	.000	.000	.000	.000

PIPE ELEMENT INPUT DATA

ELEMENT NUMBER	ELEMENT TYPE	NODE -I	NODE -J	MATL. NUMBER	SECTION NUMBER	REFERENCE TEMPERATURE (BEND RADIUS)	DESIGN PRESSURE (THIRD POINT)	PEAK PRESSURE (X3-ORDINATE)	TEST PRESSURE (Y3-ORDINATE)	END CODES (Z3-ORDINATE)	END-I	END-J	NODE INCREMENT (BEND DEGREE)	INPUT TAG
1	BEND	101	9001	1	1	70.00 (96.000)	798.00 ()	.00 (11910.000)	.00 (11641.200)	0 (2135.136)	0	0	(45.0036)	I
2	BEND	9001	110	1	1	70.00 (96.000)	798.00 ()	.00 (11957.520)	.00 (11671.272)	0 (2191.368)	0	0	(44.9989)	I
3	TANGENT	110	120	1	1	70.00	798.00	.00	.00	0	0	1	II	
4	TANGENT	120	130	1	1	70.00	798.00	.00	.00	0	0	1	II	
5	TANGENT	130	140	1	1	70.00	798.00	.00	.00	0	0	1	II	
6	BEND	140	9002	1	1	70.00 (96.000)	798.00 ()	.00 (12096.468)	.00 (11759.136)	0 (2191.368)	0	0	(45.0026)	I
7	BEND	9002	150	1	1	70.00 (96.000)	798.00 ()	.00 (12143.988)	.00 (11789.184)	0 (2135.136)	0	0	(44.9943)	I
8	TANGENT	150	9003	1	1	70.00	798.00	.00	.00	0	0	1	II	
9	TANGENT	9003	9004	1	1	70.00	798.00	.00	.00	0	0	1	II	
10	TANGENT	9004	6020	1	1	70.00	798.00	.00	.00	0	0	1	II	
11	TANGENT	6020	9005	1	1	70.00	798.00	.00	.00	0	0	1	II	
12	TANGENT	9005	9006	1	1	70.00	798.00	.00	.00	0	0	1	II	
13	TANGENT	9006	6040	1	1	70.00	798.00	.00	.00	0	0	1	II	
14	TANGENT	6040	160	1	1	70.00	798.00	.00	.00	0	0	1	II	
15	BEND	160	9007	1	1	70.00 (96.000)	798.00 ()	.00 (12143.988)	.00 (11789.196)	0 (1590.912)	0	0	(45.0036)	I
16	BEND	9007	170	1	1	70.00 (96.000)	798.00 ()	.00 (12200.220)	.00 (11789.196)	0 (1534.680)	0	0	(44.9975)	I
17	TANGENT	170	6050	1	1	70.00	798.00	.00	.00	0	0	1	II	
18	TANGENT	6050	6060	1	1	70.00	798.00	.00	.00	0	0	1	II	
19	TANGENT	6060	9008	1	1	70.00	798.00	.00	.00	0	0	1	II	
20	TANGENT	9008	9009	1	1	70.00	798.00	.00	.00	0	0	1	II	
21	TANGENT	9009	9010	1	1	70.00	798.00	.00	.00	0	0	1	II	
22	TANGENT	9010	6070	1	1	70.00	798.00	.00	.00	0	0	1	II	
23	TANGENT	6070	6080	1	1	70.00	798.00	.00	.00	0	0	1	II	
24	TANGENT	6080	9011	1	1	70.00	798.00	.00	.00	0	0	1	II	
25	TANGENT	9011	180	1	1	70.00	798.00	.00	.00	0	0	1	II	
26	TANGENT	180	9012	1	2	70.00	798.00	.00	.00	0	0	1	II	
27	TANGENT	9012	9013	1	2	70.00	798.00	.00	.00	0	0	1	II	
28	TANGENT	9013	6090	1	2	70.00	798.00	.00	.00	0	0	1	II	
29	TANGENT	6090	6091	1	2	70.00	798.00	.00	.00	0	0	1	II	
30	TANGENT	6091	190	1	3	70.00	798.00	.00	.00	0	0	1	II	
31	TANGENT	190	200	1	3	70.00	798.00	.00	.00	0	0	1	II	
32	TANGENT	200	210	1	3	70.00	798.00	.00	.00	0	0	1	II	
33	TANGENT	210	220	1	3	70.00	798.00	.00	.00	0	0	1	II	
34	TANGENT	220	230	1	3	70.00	798.00	.00	.00	0	0	1	II	
35	TANGENT	230	239	1	3	70.00	798.00	.00	.00	0	0	1	II	
36	TANGENT	239	240	1	3	70.00	798.00	.00	.00	0	0	1	II	
37	TANGENT	240	250	1	3	70.00	798.00	.00	.00	0	0	1	II	
38	TANGENT	250	260	1	3	70.00	798.00	.00	.00	0	0	1	II	

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PIPE ELEMENT INPUT DATA

ELEMENT NUMBER	ELEMENT TYPE	NODE -I	NODE -J	MATL. NUMBER	SECTION NUMBER	REFERENCE TEMPERATURE (BEND RADIUS)	DESIGN PRESSURE (THIRD POINT)	PEAK PRESSURE (X3-ORDINATE)	TEST PRESSURE (Y3-ORDINATE)	TEST END CODES (Z3-ORDINATE)	INCREMENT (BEND DEGREE)	NODE INCREMENT (BEND DEGREE)	INPUT TAG
39	TANGENT	260	261	1	3	70.00	798.00	.00	.00	0	1		II
40	TANGENT	261	9014	1	3	70.00	798.00	.00	.00	0	1		II
41	TANGENT	9014	280	1	3	70.00	798.00	.00	.00	0	1		II
42	TANGENT	280	290	1	3	70.00	798.00	.00	.00	0	1		II
43	TANGENT	290	291	1	3	70.00	798.00	.00	.00	0	1		II
44	TANGENT	291	300	1	3	70.00	798.00	.00	.00	0	1		II
45	TANGENT	300	310	1	8	70.00	798.00	.00	.00	0	1		II
46	TANGENT	310	315	1	9	70.00	798.00	.00	.00	0	1		II
47	TANGENT	310	320	1	8	70.00	798.00	.00	.00	0	1		II
48	TANGENT	320	330	1	3	70.00	798.00	.00	.00	0	1		II
49	TANGENT	330	340	1	3	70.00	798.00	.00	.00	0	1		II
50	TANGENT	240	1000	1	7	70.00	798.00	.00	.00	0	1		II
51	TANGENT	1000	1002	2	4	70.00	.00	.00	.00	0	1		II
52	TANGENT	1002	1003	2	4	70.00	.00	.00	.00	0	1		II
53	TANGENT	1003	1010	2	4	70.00	.00	.00	.00	0	1		II
54	TANGENT	1010	1020	2	10	70.00	.00	.00	.00	0	1		II
55	TANGENT	1020	1025	2	9	70.00	.00	.00	.00	0	1		II
56	TANGENT	1020	1040	1	11	70.00	.00	.00	.00	0	1		II
57	TANGENT	1040	1050	1	5	70.00	.00	.00	.00	0	1		II
58	BEND	1050	1060	1	5	70.00	.00	.00	.00	0	1		II
						(15.0000)	()	(12996.996)	(11819.556)	(1583.064)	(90.0001)		I
59	TANGENT	1060	1070	1	5	70.00	.00	.00	.00	0	1		II
60	TANGENT	1070	1080	1	11	70.00	.00	.00	.00	0	1		II
61	TANGENT	1080	1090	1	5	70.00	.00	.00	.00	0	1		II
62	BEND	1090	1100	1	5	70.00	.00	.00	.00	0	1		II
						(15.0000)	()	(12996.996)	(11758.836)	(1583.064)	(90.0898)		I
63	TANGENT	1100	1110	1	5	70.00	.00	.00	.00	0	1		II
64	TANGENT	250	1120	1	7	70.00	798.00	.00	.00	0	1		II
65	TANGENT	1120	1122	2	4	70.00	.00	.00	.00	0	1		II
66	TANGENT	1122	1123	2	4	70.00	.00	.00	.00	0	1		II
67	TANGENT	1123	1130	2	4	70.00	.00	.00	.00	0	1		II
68	TANGENT	1130	1140	2	10	70.00	.00	.00	.00	0	1		II
69	TANGENT	1140	1145	2	9	70.00	.00	.00	.00	0	1		II
70	TANGENT	1140	1160	1	11	70.00	.00	.00	.00	0	1		II
71	TANGENT	1160	1170	1	5	70.00	.00	.00	.00	0	1		II
72	BEND	1170	1180	1	5	70.00	.00	.00	.00	0	1		II
						(15.0000)	()	(13035.996)	(11819.556)	(1583.064)	(90.0001)		I
73	TANGENT	1180	1190	1	5	70.00	.00	.00	.00	0	1		II
74	TANGENT	1140	1200	1	11	70.00	.00	.00	.00	0	1		II
75	TANGENT	1200	1210	1	5	70.00	.00	.00	.00	0	1		II
76	BEND	1210	1220	1	5	70.00	.00	.00	.00	0	1		II
						(15.0000)	()	(13035.996)	(11758.836)	(1583.064)	(90.0001)		I
77	TANGENT	1220	1230	1	5	70.00	.00	.00	.00	0	1		II
78	TANGENT	260	1240	1	7	70.00	798.00	.00	.00	0	1		II
79	TANGENT	1240	1242	2	4	70.00	.00	.00	.00	0	1		II
80	TANGENT	1242	1243	2	4	70.00	.00	.00	.00	0	1		II

PIPE ELEMENT INPUT DATA

ELEMENT NUMBER	ELEMENT TYPE	NODE -I	NODE -J	MATL. NUMBER	SECTION NUMBER	REFERENCE TEMPERATURE (BEND RADIUS)	DESIGN PRESSURE (THIRD POINT)	PEAK PRESSURE (X3-ORDINATE)	TEST PRESSURE (Y3-ORDINATE)	END CODES END-I END-J (Z3-ORDINATE)	NODE INCREMENT (BEND DEGREE)	INPUT TAG
81	TANGENT	1243	1250	2	4	70.00	.00	.00	.00	0 0	1	II
82	TANGENT	1250	1260	2	10	70.00	.00	.00	.00	0 0	1	II
83	TANGENT	1260	1265	2	9	70.00	.00	.00	.00	0 0	1	II
84	TANGENT	1260	1280	1	11	70.00	.00	.00	.00	0 0	1	II
85	TANGENT	1280	1290	1	5	70.00	.00	.00	.00	0 0	1	II
86	BEND	1290	1300	1	5	70.00	.00	.00	.00	0 0	1	II
						(15.000)	()	(13074.996)	(11819.556)	(1583.064)	(90.0001)	I
87	TANGENT	1300	1310	1	5	70.00	.00	.00	.00	0 0	1	II
88	TANGENT	1260	1320	1	11	70.00	.00	.00	.00	0 0	1	II
89	TANGENT	1320	1330	1	5	70.00	.00	.00	.00	0 0	1	II
90	BEND	1330	1340	1	5	70.00	.00	.00	.00	0 0	1	II
						(15.000)	()	(13074.996)	(11758.836)	(1583.064)	(90.0001)	I
91	TANGENT	1340	1350	1	5	70.00	.00	.00	.00	0 0	1	II
92	TANGENT	290	4000	1	7	70.00	.00	.00	.00	0 0	1	II
93	TANGENT	4000	4010	1	6	70.00	.00	.00	.00	0 0	1	II
94	TANGENT	4010	4020	1	6	70.00	.00	.00	.00	0 0	1	II
95	TANGENT	4020	4030	1	6	70.00	.00	.00	.00	0 0	1	II

BRANCH POINT DATA

BRANCH POINT	NODE NUMBER	CONNECTIONS . . .			
1	310	-45AT J	46AT I	47AT I	ONONE
2	240	-36AT J	37AT I	50AT I	ONONE
3	1020	-54AT J	55AT I	56AT I	60AT I
4	250	-37AT J	38AT I	64AT I	ONONE
5	1140	-68AT J	69AT I	70AT I	74AT I
6	260	-30AT J	39AT I	78AT I	ONONE
7	1260	-82AT J	83AT I	84AT I	88AT I
8	290	-42AT J	43AT I	92AT I	ONONE

NODAL LOADS (STATIC) OR MASSES (DYNAMIC)

NODE NUMBER	LOAD CASE	X-AXIS FORCE	Y-AXIS FORCE	Z-AXIS FORCE	X-AXIS MOMENT	Y-AXIS MOMENT	Z-AXIS MOMENT
6090	0	9.18737E+00	9.18737E+00	9.18737E+00	0.00000E+00	0.00000E+00	0.00000E+00
315	0	4.78778E+01	4.78778E+01	4.78778E+01	0.00000E+00	0.00000E+00	0.00000E+00
1010	0	5.12422E-01	5.12422E-01	5.12422E-01	0.00000E+00	0.00000E+00	0.00000E+00
1025	0	1.03520E+01	1.03520E+01	1.03520E+01	0.00000E+00	0.00000E+00	0.00000E+00
1040	0	2.19979E-01	2.19979E-01	2.19979E-01	0.00000E+00	0.00000E+00	0.00000E+00
1080	0	2.19979E-01	2.19979E-01	2.19979E-01	0.00000E+00	0.00000E+00	0.00000E+00
1130	0	5.12422E-01	5.12422E-01	5.12422E-01	0.00000E+00	0.00000E+00	0.00000E+00
1145	0	1.03520E+01	1.03520E+01	1.03520E+01	0.00000E+00	0.00000E+00	0.00000E+00
1160	0	2.19979E-01	2.19979E-01	2.19979E-01	0.00000E+00	0.00000E+00	0.00000E+00
1200	0	2.19979E-01	2.19979E-01	2.19979E-01	0.00000E+00	0.00000E+00	0.00000E+00
1250	0	5.12422E-01	5.12422E-01	5.12422E-01	0.00000E+00	0.00000E+00	0.00000E+00
1265	0	1.03520E+01	1.03520E+01	1.03520E+01	0.00000E+00	0.00000E+00	0.00000E+00
1280	0	2.19979E-01	2.19979E-01	2.19979E-01	0.00000E+00	0.00000E+00	0.00000E+00
1320	0	2.19979E-01	2.19979E-01	2.19979E-01	0.00000E+00	0.00000E+00	0.00000E+00
4030	0	6.98758E-02	6.98758E-02	6.98758E-02	0.00000E+00	0.00000E+00	0.00000E+00

DYNAMIC ANALYSIS

STRUCTURE
LOAD CASE

1 LOAD CASE 3 - FORCE TIME HISTORY

ELEMENT	LOAD	MULTIPLIERS
A	B	C
.000	.000	.000
		D
		.000

E I G E N V A L U E A N A L Y S I S

SUBSPACE ITERATION SOLUTION IS CARRIED OUT

CONTROL INFORMATION

FLAG FOR ADDITIONAL PRINTING = 0
EQ.0, SUPPRESS
EQ.1, PRINT

STURM SEQUENCE CHECK FLAG (*) = 0
EQ.0, PERFORM CHECK
EQ.1, PASS

MAXIMUM ITERATION CYCLES (*) = 16

CONVERGENCE TOLERANCE (*) = 1.0000E-05

CUT-OFF FREQUENCY (CPS) = 1.1000E+02

NUMBER OF STARTING ITERATION
VECTORS TO BE READ FROM
TAPE10 (*) = 0

(*) APPLICABLE TO SUBSPACE
ITERATION SOLUTIONS ONLY

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SOLUTION IS SOUGHT FOR FOLLOWING EIGENPROBLEM

NUMBER OF EQUATIONS = 576
HALF BANDWIDTH OF STIFFNESS MATRIX = 306
NUMBER OF EQUATION BLOCKS = 2
NUMBER OF EQUATIONS PER BLOCK = 465
NUMBER OF EIGENVALUES REQUIRED = 50

PRINT OF FREQUENCIES

MODE NUMBER	CIRCULAR FREQUENCY (RAD/SEC)	FREQUENCY (CYCLES/SEC)	PERIOD (SEC)	TOLERANCE
1	5.3750E+01	8.5546E+00	1.1690E-01	1.5740E-16
2	5.6590E+01	9.0066E+00	1.1103E-01	1.4200E-16
3	5.8236E+01	9.2685E+00	1.0789E-01	6.7044E-16
4	7.5859E+01	1.2073E+01	8.2827E-02	1.5805E-16
5	1.0130E+02	1.6122E+01	6.2028E-02	1.2409E-15
6	1.0307E+02	1.6403E+01	6.0963E-02	1.0274E-15
7	1.0396E+02	1.6546E+01	6.0437E-02	3.3659E-16
8	1.0719E+02	1.7052E+01	5.8619E-02	7.9163E-16
9	1.0846E+02	1.7261E+01	5.7933E-02	0.0000E+00
10	1.0971E+02	1.7461E+01	5.7272E-02	0.0000E+00
11	1.1787E+02	1.8759E+01	5.3307E-02	5.2372E-16
12	1.3621E+02	2.1679E+01	4.6128E-02	1.1765E-15
13	1.5140E+02	2.4097E+01	4.1499E-02	9.5221E-16
14	1.5858E+02	2.5239E+01	3.9621E-02	1.0126E-15
15	1.5925E+02	2.5346E+01	3.9454E-02	7.1724E-16
16	1.8549E+02	2.9521E+01	3.3874E-02	4.2295E-16
17	1.9369E+02	3.0827E+01	3.2439E-02	0.0000E+00
18	1.9689E+02	3.1336E+01	3.1912E-02	5.6308E-16
19	2.1332E+02	3.3952E+01	2.9454E-02	6.3955E-16
20	2.6647E+02	4.2410E+01	2.3579E-02	1.2296E-15
21	2.7719E+02	4.4116E+01	2.2667E-02	1.8939E-15
22	2.9276E+02	4.6595E+01	2.1462E-02	1.0187E-15
23	3.4396E+02	5.4744E+01	1.8267E-02	6.1499E-16
24	3.5166E+02	5.5969E+01	1.7867E-02	7.0602E-16
25	3.5299E+02	5.6181E+01	1.7800E-02	5.8393E-16
26	3.5591E+02	5.6644E+01	1.7654E-02	1.0339E-15
27	3.7013E+02	5.8909E+01	1.6975E-02	0.0000E+00
28	4.2599E+02	6.7798E+01	1.4750E-02	4.8114E-16
29	4.2750E+02	6.8039E+01	1.4697E-02	2.7869E-14
30	4.3194E+02	6.8745E+01	1.4546E-02	5.1945E-14

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31	4.3333E+02	6.8967E+01	1.4500E-02	2.5574E-14
32	4.4485E+02	7.0799E+01	1.4124E-02	7.7948E-15
33	4.6606E+02	7.4175E+01	1.3482E-02	2.2644E-14
34	5.0788E+02	8.0832E+01	1.2371E-02	1.0812E-12
35	5.3366E+02	8.4935E+01	1.1774E-02	8.1754E-14
36	5.6340E+02	8.9668E+01	1.1152E-02	1.6437E-11
37	5.8709E+02	9.3438E+01	1.0702E-02	3.1477E-10
38	6.2111E+02	9.8852E+01	1.0116E-02	7.0616E-09
39	6.3749E+02	1.0146E+02	9.8561E-03	7.7198E-10
40	6.6609E+02	1.0601E+02	9.4329E-03	1.0785E-07
41	7.3107E+02	1.1635E+02	8.5945E-03	3.2109E-06

MODAL PARTICIPATION FACTORS

MODE	FREQ(CPS)	X-DIRECTION	Y-DIRECTION	Z-DIRECTION
1	8.555	1.7225E+00	-3.5046E+00	-1.9167E+00
2	9.007	-5.3657E-02	-9.1265E+00	3.2388E-02
3	9.269	2.7093E+00	-5.0719E+00	2.4778E-01
4	12.073	4.4383E-01	-8.2384E-01	1.3209E+01
5	16.122	4.9491E-01	-3.8431E+00	-2.1798E-01
6	16.403	-8.9216E+00	1.2011E-01	5.1028E-01
7	16.546	-6.3689E-01	-2.4350E+00	-1.4104E-01
8	17.059	2.5476E-04	5.6814E-01	1.1916E-02
9	17.261	-9.7970E-02	-9.6522E-03	1.6508E-01
10	17.461	2.3596E-01	1.7380E-03	-8.9622E-02
11	18.759	-1.8997E-03	4.4821E+00	8.8680E-04
12	21.679	6.8334E+00	4.1377E+00	-9.8039E-02
13	24.097	3.3930E-03	4.2441E-01	1.4650E-02
14	25.239	5.6608E-01	-1.7023E-01	7.8237E-01
15	25.346	-1.2993E+01	1.7605E-01	-8.0551E-01
16	29.521	1.3729E+00	4.0960E-01	2.2357E+00
17	30.827	2.6566E-01	-2.7334E+00	-6.4345E+00
18	31.336	-7.2166E-01	-8.9136E+00	2.4448E+00
19	33.952	-3.1673E+00	1.6909E+00	1.6420E+00
20	42.410	4.4788E-01	1.4391E+00	2.5028E+00
21	44.116	-1.2618E-01	2.7404E+00	-9.7091E-01
22	46.595	1.0765E-02	1.7325E-01	5.0803E+00
23	54.744	2.5223E+00	-1.9571E+00	-6.7092E-01
24	55.969	-1.5943E+00	-3.0991E-01	-1.1579E+00
25	56.181	3.9315E-02	1.9947E+00	3.9723E-02
26	56.644	1.8281E+00	2.0411E+00	-7.0866E+00
27	58.909	-8.9562E-01	5.0301E+00	3.0296E+00
28	67.798	1.6578E+00	-1.2053E+00	1.6884E+00
29	68.039	-3.0745E-02	-1.5139E-01	-3.1123E-02
30	68.745	5.8863E-04	9.3976E-02	6.0558E-04
31	68.967	6.8819E-03	1.1179E-01	8.6418E-03

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32	70.799	-2.1674E+00	-3.1665E-01	-9.6395E-01
33	74.175	1.7526E-02	3.7548E-01	1.2077E-02
34	80.833	3.0507E-01	-1.2950E+00	2.3874E-01
35	84.935	-2.4230E-01	-3.7382E+00	-1.3868E-01
36	89.665	-2.4249E-01	2.1531E-01	-1.7437E-01
37	93.438	-1.2592E+00	-1.8104E-03	-4.7126E-01
38	98.852	-7.4436E-01	-1.4480E-01	-1.3387E+00
39	101.460	4.3429E-02	2.1542E+00	1.7174E-01
40	106.012	-2.1857E-01	-3.8404E-01	8.7072E-01

FORCED RESPONSE ANALYSIS

SUPPORT GROUP NUMBER = 1

CONTROL INFORMATION

NUMBER OF TIME FUNCTIONS	=	5
GROUND MOTION INDICATOR	=	0
EQ.0, NONE		
EQ.1, GROUND INPUT		
NUMBER OF ARRIVAL TIMES	=	1
NUMBER OF TIME STEPS	=	30000
OUTPUT PRINT INTERVAL	=	10
TIME STEP	=	.00010
DAMPING FACTOR	=	.03000

DYNAMIC NODAL FORCES/MOMENTS

NODE NUMBER	NODAL DEGREE OF FREEDOM	TIME FUNCTION NUMBER	ARRIVAL TIME NUMBER	TIME FUNCTION MULTIPLIER
101	3	3	1	-1.0000E+00
130	1	4	1	-8.4500E-01
130	2	4	1	-5.4300E-01
6040	3	5	1	1.0000E+00
6070	1	2	1	-1.0000E+00
3:0	1	1	1	-1.0000E+00
	0	0	1	0.0000E+00

ARRIVAL TIME VALUES

ENTRY NUMBER	ARRIVAL TIME VALUE
1	.000000

TIME FUNCTION NUMBER = (1)
 FUNCTION DESCRIPTION = (TH-1 NODE 310 FORCE VS TIME)
 NUMBER OF ABSCISSAE = { 758 }
 FUNCTION SCALE FACTOR = { .1000E+04 }

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TIME VALUE	FUNCTION	TIME VALUE	FUNCTION	TIME VALUE	FUNCTION	TIME VALUE	FUNCTION	TIME VALUE	FUNCTION
.00000	5.5285E+02	.00020	5.5279E+02	.00040	5.5283E+02	.00060	5.5275E+02	.00080	5.5275E+02
.00100	5.5265E+02	.00131	5.5275E+02	.00162	5.5293E+02	.00194	5.5311E+02	.00225	5.5255E+02
.00256	5.5042E+02	.00288	5.4601E+02	.00319	5.3965E+02	.00350	5.3162E+02	.00381	5.2269E+02
.00411	5.1353E+02	.00442	5.0487E+02	.00473	4.9682E+02	.00504	4.8958E+02	.00535	4.8314E+02
.00566	4.7760E+02	.00596	4.7272E+02	.00627	4.6852E+02	.00658	4.6407E+02	.00689	4.6171E+02
.00719	4.5897E+02	.00750	4.5665E+02	.00781	4.5459E+02	.00812	4.5276E+02	.00843	4.5121E+02
.00873	4.4973E+02	.00904	4.4853E+02	.00935	4.4742E+02	.00966	4.4641E+02	.00996	4.4558E+02
.01027	4.4475E+02	.01058	4.4409E+02	.01088	4.4345E+02	.01119	4.4287E+02	.01150	4.4230E+02
.01180	4.4180E+02	.01211	4.4144E+02	.01241	4.4100E+02	.01272	4.4066E+02	.01302	4.4020E+02
.01333	4.3995E+02	.01364	4.3958E+02	.01394	4.3931E+02	.01425	4.3910E+02	.01455	4.3881E+02
.01485	4.3855E+02	.01516	4.3832E+02	.01546	4.3817E+02	.01576	4.3792E+02	.01607	4.3775E+02
.01637	4.3759E+02	.01667	4.3742E+02	.01698	4.3724E+02	.01728	4.3706E+02	.01758	4.3687E+02
.01789	4.3678E+02	.01819	4.3659E+02	.01849	4.3649E+02	.01879	4.3628E+02	.01910	4.3618E+02
.01940	4.3608E+02	.01970	4.3589E+02	.02000	4.3580E+02	.02031	4.3572E+02	.02061	4.3552E+02
.02091	4.3542E+02	.02121	4.3532E+02	.02151	4.3522E+02	.02181	4.3513E+02	.02212	4.3504E+02
.02242	4.3494E+02	.02272	4.3474E+02	.02302	4.3465E+02	.02332	4.3455E+02	.02362	4.3446E+02
.02393	4.3436E+02	.02423	4.3427E+02	.02453	4.3418E+02	.02483	4.3410E+02	.02513	4.3403E+02
.02543	4.3395E+02	.02573	4.3388E+02	.02603	4.3381E+02	.02633	4.3364E+02	.02663	4.3358E+02
.02694	4.3352E+02	.02724	4.3344E+02	.02754	4.3337E+02	.02784	4.3331E+02	.02814	4.3324E+02
.02844	4.3317E+02	.02874	4.3310E+02	.02904	4.3303E+02	.02934	4.3296E+02	.02964	4.3290E+02
.02994	4.3283E+02	.03024	4.3277E+02	.03054	4.3270E+02	.03084	4.3264E+02	.03114	4.3258E+02
.03144	4.3251E+02	.03174	4.3246E+02	.03204	4.3239E+02	.03234	4.3234E+02	.03264	4.3229E+02
.03294	4.3223E+02	.03324	4.3217E+02	.03354	4.3211E+02	.03384	4.3206E+02	.03414	4.3201E+02
.03444	4.3196E+02	.03474	4.3191E+02	.03504	4.3185E+02	.03534	4.3181E+02	.03564	4.3175E+02
.03594	4.3171E+02	.03624	4.3156E+02	.03654	4.3151E+02	.03684	4.3147E+02	.03714	4.3143E+02
.03744	4.3138E+02	.03774	4.3134E+02	.03804	4.3130E+02	.03833	4.3125E+02	.03863	4.3121E+02
.03893	4.3107E+02	.03923	4.3102E+02	.03953	4.3099E+02	.03983	4.3095E+02	.04013	4.3091E+02
.04043	4.3086E+02	.04073	4.3073E+02	.04103	4.3070E+02	.04133	4.3067E+02	.04163	4.3063E+02
.04193	4.3059E+02	.04223	4.3056E+02	.04253	4.3043E+02	.04282	4.3040E+02	.04312	4.3036E+02
.04342	4.3033E+02	.04372	4.3030E+02	.04402	4.3017E+02	.04432	4.3014E+02	.04462	4.3010E+02
.04492	4.3007E+02	.04522	4.3005E+02	.04552	4.2992E+02	.04582	4.2989E+02	.04612	4.2986E+02
.04641	4.2983E+02	.04671	4.2971E+02	.04701	4.2968E+02	.04731	4.2966E+02	.04761	4.2964E+02
.04791	4.2950E+02	.04821	4.2948E+02	.04851	4.2946E+02	.04881	4.2943E+02	.04911	4.2931E+02
.04941	4.2929E+02	.04970	4.2927E+02	.05000	4.2915E+02	.05479	4.2843E+02	.05986	4.2759E+02
.06492	4.2679E+02	.06999	4.2594E+02	.07477	4.2522E+02	.07984	4.2442E+02	.08492	4.2363E+02
.08999	4.2287E+02	.09475	4.2220E+02	.09982	4.2144E+02	.10490	4.2068E+02	.11000	4.1993E+02
.11480	4.1918E+02	.11980	4.1844E+02	.12490	4.1769E+02	.13000	4.1704E+02	.13470	4.1631E+02
.13980	4.1565E+02	.14490	4.1491E+02	.15000	4.1417E+02	.15470	4.1353E+02	.15980	4.1279E+02
.16490	4.1214E+02	.17000	4.1140E+02	.17480	4.1075E+02	.17980	4.1012E+02	.18490	4.0949E+02
.19000	4.0891E+02	.19480	4.0876E+02	.19980	4.0936E+02	.20490	4.1130E+02	.21000	4.1665E+02
.21470	4.2657E+02	.21980	4.4122E+02	.22480	4.5727E+02	.22980	4.7260E+02	.23480	4.8639E+02
.23980	4.9862E+02	.24480	5.0948E+02	.24980	5.1913E+02	.25480	5.2778E+02	.25970	5.3563E+02
.26500	5.4317E+02	.26990	5.4964E+02	.27490	5.5549E+02	.27990	5.6080E+02	.28480	5.6578E+02
.28980	5.7024E+02	.29470	5.7448E+02	.30000	5.7858E+02	.30490	5.8207E+02	.30990	5.8539E+02
.31480	5.8845E+02	.31980	5.9118E+02	.32470	5.9375E+02	.33000	5.9622E+02	.33500	5.9825E+02
.33990	6.0011E+02	.34490	6.0177E+02	.34980	6.0324E+02	.35480	6.0459E+02	.35970	6.0587E+02
.36500	6.0700E+02	.36990	6.0795E+02	.37490	6.0880E+02	.37980	6.0965E+02	.38470	6.1029E+02
.39000	6.1094E+02	.39490	6.1140E+02	.39980	6.1179E+02	.40500	6.1221E+02	.40990	6.1243E+02
.41470	6.1258E+02	.41990	6.1269E+02	.42500	6.1282E+02	.42980	6.1278E+02	.43490	6.1270E+02
.43970	6.1259E+02	.44480	6.1252E+02	.44980	6.1232E+02	.45490	6.1208E+02	.45990	6.1182E+02
.46470	6.1154E+02	.46980	6.1134E+02	.47480	6.1104E+02	.47980	6.1069E+02	.48490	6.1035E+02
.48990	6.1005E+02	.49500	6.0981E+02	.50000	6.0948E+02	.50500	6.0915E+02	.51000	6.0879E+02
.51470	6.0851E+02	.51970	6.0815E+02	.52500	6.0779E+02	.53000	6.0744E+02	.53500	6.0710E+02
.54000	6.0676E+02	.54500	6.0643E+02	.55000	6.0611E+02	.55500	6.0579E+02	.56000	6.0547E+02
.56500	6.0519E+02	.57000	6.0488E+02	.57500	6.0457E+02	.58000	6.0424E+02	.58500	6.0390E+02
.59000	6.0355E+02	.59500	6.0319E+02	.60000	6.0295E+02	.60500	6.0245E+02	.61000	6.0165E+02
.61500	6.0059E+02	.62000	5.9908E+02	.62500	5.9707E+02	.62980	5.9467E+02	.63480	5.9159E+02

.63990	5.8874E+02	.64500	5.8590E+02	.64980	5.8333E+02	.65500	5.8090E+02	.65990	5.7881E+02
.66480	5.7717E+02	.67000	5.7583E+02	.67500	5.7479E+02	.67990	5.7399E+02	.68480	5.7317E+02
.68980	5.7256E+02	.69480	5.7190E+02	.69970	5.7149E+02	.70500	5.7115E+02	.70990	5.7096E+02
.71490	5.7084E+02	.71990	5.7073E+02	.72480	5.7064E+02	.72980	5.7053E+02	.73470	5.7054E+02
.74000	5.7053E+02	.74490	5.7064E+02	.74990	5.7074E+02	.75480	5.7075E+02	.75980	5.7088E+02
.76500	5.7104E+02	.76990	5.7121E+02	.77490	5.7140E+02	.77980	5.7160E+02	.78480	5.7181E+02
.78970	5.7202E+02	.79500	5.7225E+02	.79990	5.7247E+02	.80490	5.7267E+02	.80980	5.7289E+02
.81480	5.7309E+02	.81980	5.7328E+02	.82500	5.7349E+02	.83000	5.7367E+02	.83490	5.7386E+02
.83990	5.7394E+02	.84480	5.7412E+02	.84980	5.7430E+02	.85470	5.7448E+02	.86000	5.7467E+02
.86490	5.7486E+02	.86990	5.7503E+02	.87480	5.7521E+02	.87980	5.7538E+02	.88470	5.7555E+02
.89000	5.7572E+02	.89490	5.7588E+02	.89990	5.7602E+02	.90490	5.7617E+02	.90980	5.7641E+02
.91480	5.7655E+02	.92000	5.7670E+02	.92500	5.7684E+02	.92990	5.7698E+02	.93490	5.7714E+02
.93980	5.7723E+02	.94480	5.7741E+02	.94970	5.7761E+02	.95500	5.7783E+02	.95990	5.7808E+02
.96490	5.7835E+02	.96980	5.7863E+02	.97480	5.7893E+02	.97970	5.7924E+02	.98500	5.7958E+02
.98990	5.7987E+02	.99490	5.8016E+02	.99980	5.8042E+02	1.00500	5.8043E+02	1.01000	5.8047E+02
1.01500	5.8036E+02	1.02000	5.8019E+02	1.02500	5.7998E+02	1.03000	5.7983E+02	1.03500	5.7953E+02
1.04000	5.7914E+02	1.04500	5.7887E+02	1.05000	5.7854E+02	1.05500	5.7827E+02	1.06000	5.7794E+02
1.06500	5.7757E+02	1.07000	5.7727E+02	1.07500	5.7684E+02	1.08000	5.7651E+02	1.08500	5.7613E+02
1.09000	5.7568E+02	1.09500	5.7516E+02	1.10000	5.7474E+02	1.10500	5.7428E+02	1.11000	5.7382E+02
1.11500	5.7324E+02	1.12000	5.7263E+02	1.12500	5.7211E+02	1.13000	5.7144E+02	1.13500	5.7080E+02
1.14000	5.7013E+02	1.14500	5.6930E+02	1.15000	5.6859E+02	1.15500	5.6773E+02	1.16000	5.6682E+02
1.16500	5.6590E+02	1.17000	5.6487E+02	1.17500	5.6373E+02	1.18000	5.6255E+02	1.18500	5.6140E+02
1.19000	5.6011E+02	1.19500	5.5864E+02	1.20000	5.5715E+02	1.20500	5.5559E+02	1.21000	5.5390E+02
1.21500	5.5215E+02	1.22000	5.5032E+02	1.22500	5.4835E+02	1.23000	5.4625E+02	1.23500	5.4397E+02
1.24000	5.4159E+02	1.24500	5.3911E+02	1.25000	5.3659E+02	1.25500	5.3384E+02	1.26000	5.3077E+02
1.26500	5.2758E+02	1.27000	5.2437E+02	1.27500	5.2081E+02	1.28000	5.1703E+02	1.28500	5.1302E+02
1.29000	5.0858E+02	1.29500	5.0397E+02	1.30000	4.9921E+02	1.30500	4.9375E+02	1.31000	4.8825E+02
1.31500	4.8239E+02	1.32000	4.7398E+02	1.32500	4.6546E+02	1.33000	4.5642E+02	1.33500	4.4634E+02
1.34000	4.3624E+02	1.34500	4.2487E+02	1.35000	4.1336E+02	1.35500	4.0062E+02	1.36000	3.8775E+02
1.36500	3.7341E+02	1.37000	3.5897E+02	1.37500	3.4308E+02	1.38000	3.2619E+02	1.38500	3.0943E+02
1.39000	2.9083E+02	1.39500	2.7224E+02	1.40000	2.5177E+02	1.40500	2.3028E+02	1.41000	2.0894E+02
1.41500	1.8529E+02	1.42000	1.6191E+02	1.42500	1.3605E+02	1.43000	1.1034E+02	1.43500	8.3438E+01
1.44000	5.5280E+01	1.44500	2.5766E+01	1.45000	-3.5260E+00	1.45500	-3.1330E+00	1.46000	9.7760E+00
1.46500	-9.6600E-01	1.47000	-2.8700E+00	1.47500	6.0090E+00	1.48000	-1.2110E+00	1.48500	-1.2230E+00
1.49000	4.5250E+00	1.49500	-1.5320E+00	1.50000	-2.4500E-01	1.50500	3.2540E+00	1.51000	-2.0800E+00
1.51500	4.6400E-01	1.52000	2.0260E+00	1.52500	-1.9460E+00	1.53000	9.6200E-01	1.53500	1.2240E+00
1.54000	-1.6560E+00	1.54500	1.2330E+00	1.55000	3.0100E-01	1.55500	-1.1480E+00	1.56000	1.2930E+00
1.56500	-3.5000E-01	1.57000	-5.1700E-01	1.57500	1.0650E+00	1.58000	-5.6500E-01	1.58500	-1.0400E-01
1.59000	6.9100E-01	1.59500	-6.4500E-01	1.60000	2.3300E-01	1.60500	4.0900E-01	1.61000	-5.6600E-01
1.61500	3.6500E-01	1.62000	3.6000E-02	1.62500	-3.8800E-01	1.63000	4.1800E-01	1.63500	-1.0700E-01
1.64000	-2.2100E-01	1.64500	3.6500E-01	1.65000	-2.2000E-01	1.65500	-3.8000E-02	1.66000	2.5000E-01
1.66500	-2.6890E-01	1.67000	8.9000E-02	1.67500	1.0900E-01	1.68000	-2.3200E-01	1.68500	1.6700E-01
1.69000	2.1000E-02	1.69500	-1.7000E-01	1.70000	1.9300E-01	1.70500	-7.2000E-02	1.71000	-8.6000E-02
1.71500	1.7400E-01	1.72000	-1.2500E-01	1.72500	-8.0000E-03	1.73000	1.2700E-01	1.73500	-1.4500E-01
1.74000	7.9000E-02	1.74500	4.4000E-02	1.75000	-1.2000E-01	1.75500	1.0200E-01	1.76000	-7.0000E-03
1.76500	-8.4000E-02	1.77000	1.0500E-01	1.77500	-5.8000E-02	1.78000	-3.3000E-02	1.78500	8.3000E-02
1.79000	-7.2000E-02	1.79500	1.4000E-02	1.80000	4.8000E-02	1.80500	-7.1000E-02	1.81000	3.6000E-02
1.81500	2.1000E-02	1.82000	-3.4000E-02	1.82500	4.9000E-02	1.83000	-8.0000E-03	1.83500	-3.3000E-02
1.84000	4.6000E-02	1.84500	-2.5000E-02	1.85000	-1.0000E-02	1.85500	3.5000E-02	1.86000	-3.2000E-02
1.86500	9.0000E-03	1.87000	1.7000E-02	1.87500	-2.9000E-02	1.88000	2.2000E-02	1.88500	4.0000E-03
1.89000	-2.1000E-02	1.89500	2.3000E-02	1.90000	-8.0000E-03	1.90500	-9.0000E-03	1.91000	2.0000E-02
1.91500	-1.6000E-02	1.92000	0.0000E+00	1.92500	1.5000E-02	1.93000	-1.6000E-02	1.93500	6.0000E-03
1.94000	6.0000E-03	1.94500	-1.4000E-02	1.95000	1.1000E-02	1.95500	0.0000E+00	1.96000	-8.0000E-03
1.96500	1.1000E-02	1.97000	-6.0000E-03	1.97500	-3.0000E-03	1.98000	9.0000E-03	1.98500	-8.0000E-03
1.99000	1.0000E-03	1.99500	5.0000E-03	2.00000	-8.0000E-03	2.00500	5.0000E-03	2.01000	3.0000E-03
2.01500	-6.0000E-03	2.02000	6.0000E-03	2.02500	-2.0000E-03	2.03000	-4.0000E-03	2.03500	5.0000E-03
2.04000	-3.0000E-03	2.04500	-1.0000E-03	2.05000	4.0000E-03	2.05500	-4.0000E-03	2.06000	2.0000E-03
2.06500	2.0000E-03	2.07000	-3.0000E-03	2.07500	2.0000E-03	2.08000	0.0000E+00	2.08500	-3.0000E-03
2.09000	3.0000E-03	2.09500	-1.0000E-03	2.10000	-1.0000E-03	2.10500	3.0000E-03	2.11000	-2.0000E-03
2.11500	0.0000E+00	2.12000	2.0000E-03	2.12500	-2.0000E-03	2.13000	1.0000E-03	2.13500	1.0000E-03
2.14000	-2.0000E-03	2.14500	1.0000E-03	2.15000	0.0000E+00	2.15500	-1.0000E-03	2.16000	1.0000E-03
2.16500	-1.0000E-03	2.17000	0.0000E+00	2.17500	0.0000E-03	2.18000	-1.0000E-03	2.18500	0.0000E+00
2.19000	1.0000E-03	2.19500	-1.0000E-03	2.20000	1.0000E-03	2.20500	0.0000E+00	2.21000	-1.0000E-03
2.21500	1.0000E-03	2.22000	0.0000E+00	2.22500	0.0000E+00	2.23000	1.0000E-03	2.23500	0.0000E+00
2.24000	0.0000E+00	2.24500	1.0000E-03	2.25000	0.0000E+00	2.25500	0.0000E+00	2.26000	0.0000E+00
2.26500	0.0000E+00	2.27000	0.0000E+00	2.27500	0.0000E+00	2.28000	0.0000E+00	2.28500	0.0000E+00

2	29000	0.0000E+00	0.0000E+00	2	30500	0.0000E+00	0.0000E+00	2	31000	0.0000E+00
2	31500	0.0000E+00	0.0000E+00	2	33000	0.0000E+00	0.0000E+00	2	33500	0.0000E+00
2	34000	0.0000E+00	0.0000E+00	2	35500	0.0000E+00	0.0000E+00	2	36000	0.0000E+00
2	35500	0.0000E+00	0.0000E+00	2	37000	0.0000E+00	0.0000E+00	2	38500	0.0000E+00
2	37000	0.0000E+00	0.0000E+00	2	38500	0.0000E+00	0.0000E+00	2	41000	0.0000E+00
2	39000	0.0000E+00	0.0000E+00	2	40000	0.0000E+00	0.0000E+00	2	43500	0.0000E+00
2	41500	0.0000E+00	0.0000E+00	2	42500	0.0000E+00	0.0000E+00	2	46000	0.0000E+00
2	43000	0.0000E+00	0.0000E+00	2	45000	0.0000E+00	0.0000E+00	2	48500	0.0000E+00
2	44500	0.0000E+00	0.0000E+00	2	47500	0.0000E+00	0.0000E+00	2	51000	0.0000E+00
2	46000	0.0000E+00	0.0000E+00	2	50000	0.0000E+00	0.0000E+00	2	53500	0.0000E+00
2	47500	0.0000E+00	0.0000E+00	2	52500	0.0000E+00	0.0000E+00	2	56000	0.0000E+00
2	49000	0.0000E+00	0.0000E+00	2	55000	0.0000E+00	0.0000E+00	2	58500	0.0000E+00
2	51500	0.0000E+00	0.0000E+00	2	57500	0.0000E+00	0.0000E+00	2	61000	0.0000E+00
2	53000	0.0000E+00	0.0000E+00	2	60000	0.0000E+00	0.0000E+00	2	63500	0.0000E+00
2	54500	0.0000E+00	0.0000E+00	2	62500	0.0000E+00	0.0000E+00	2	66000	0.0000E+00
2	56000	0.0000E+00	0.0000E+00	2	65000	0.0000E+00	0.0000E+00	2	68500	0.0000E+00
2	57500	0.0000E+00	0.0000E+00	2	67500	0.0000E+00	0.0000E+00	2	71000	0.0000E+00
2	59000	0.0000E+00	0.0000E+00	2	70000	0.0000E+00	0.0000E+00	2	73500	0.0000E+00
2	61500	0.0000E+00	0.0000E+00	2	72500	0.0000E+00	0.0000E+00	2	76000	0.0000E+00
2	63000	0.0000E+00	0.0000E+00	2	75000	0.0000E+00	0.0000E+00	2	78500	0.0000E+00
2	64500	0.0000E+00	0.0000E+00	2	77500	0.0000E+00	0.0000E+00	2	81000	0.0000E+00
2	66000	0.0000E+00	0.0000E+00	2	80000	0.0000E+00	0.0000E+00	2	83500	0.0000E+00
2	67500	0.0000E+00	0.0000E+00	2	82500	0.0000E+00	0.0000E+00	2	86000	0.0000E+00
2	69000	0.0000E+00	0.0000E+00	2	85000	0.0000E+00	0.0000E+00	2	88500	0.0000E+00
2	70500	0.0000E+00	0.0000E+00	2	87500	0.0000E+00	0.0000E+00	2	91000	0.0000E+00
2	72000	0.0000E+00	0.0000E+00	2	90000	0.0000E+00	0.0000E+00	2	93500	0.0000E+00
2	73500	0.0000E+00	0.0000E+00	2	92500	0.0000E+00	0.0000E+00	2	96000	0.0000E+00
2	75000	0.0000E+00	0.0000E+00	2	95000	0.0000E+00	0.0000E+00	2	98500	0.0000E+00
2	76500	0.0000E+00	0.0000E+00	3	300000	0.0000E+00	0.0000E+00			
2	78000	0.0000E+00	0.0000E+00							
2	79500	0.0000E+00	0.0000E+00							
2	81000	0.0000E+00	0.0000E+00							
2	82500	0.0000E+00	0.0000E+00							
2	84000	0.0000E+00	0.0000E+00							
2	85500	0.0000E+00	0.0000E+00							
2	87000	0.0000E+00	0.0000E+00							
2	88500	0.0000E+00	0.0000E+00							
2	89000	0.0000E+00	0.0000E+00							
2	91500	0.0000E+00	0.0000E+00							
2	94000	0.0000E+00	0.0000E+00							
2	96500	0.0000E+00	0.0000E+00							
2	99000	0.0000E+00	0.0000E+00							

TIME FUNCTION NUMBER = (2)
 FUNCTION DESCRIPTION = (TH-2 NODE 6070 FORCE VS TIME)
 NUMBER OF ABSCISSAE = (758)
 FUNCTION SCALE FACTOR = (.1000E+04)

TIME VALUE	FUNCTION	TIME VALUE	FUNCTION	TIME VALUE	FUNCTION	TIME VALUE	FUNCTION	TIME VALUE	FUNCTION
.00000	-6.0000E-03	.00020	-6.0000E-03	.00040	-6.0000E-03	.00060	-6.0000E-03	.00080	-6.0000E-03
.00100	-6.0000E-03	.00131	-7.2900E-02	.00162	-3.2300E-01	.00194	-5.6600E-01	.00225	-3.0000E-03
.00256	2.1880E+00	.00288	6.6570E+00	.00319	1.3000E+01	.00350	2.1000E+01	.00381	2.9910E+01
.00411	3.9040E+01	.00442	4.7770E+01	.00473	5.5810E+01	.00504	6.3050E+01	.00535	6.9440E+01
.00566	7.5010E+01	.00596	7.9860E+01	.00627	8.4060E+01	.00658	8.7700E+01	.00689	9.0840E+01
.00719	9.3570E+01	.00750	9.5950E+01	.00781	9.8020E+01	.00812	9.9830E+01	.00843	1.0140E+02
.00873	1.0280E+02	.00904	1.0410E+02	.00935	1.0520E+02	.00966	1.0610E+02	.00996	1.0700E+02
.01027	1.0780E+02	.01058	1.0850E+02	.01088	1.0910E+02	.01119	1.0970E+02	.01150	1.1020E+02
.01180	1.1070E+02	.01211	1.1120E+02	.01241	1.1160E+02	.01272	1.1200E+02	.01302	1.1230E+02
.01333	1.1270E+02	.01364	1.1300E+02	.01394	1.1320E+02	.01425	1.1350E+02	.01455	1.1380E+02
.01485	1.1400E+02	.01516	1.1420E+02	.01546	1.1440E+02	.01576	1.1460E+02	.01607	1.1480E+02
.01637	1.1500E+02	.01667	1.1520E+02	.01698	1.1530E+02	.01728	1.1550E+02	.01758	1.1570E+02
.01789	1.1580E+02	.01819	1.1600E+02	.01849	1.1610E+02	.01879	1.1620E+02	.01910	1.1640E+02
.01940	1.1650E+02	.01970	1.1660E+02	.02000	1.1681E+02	.02031	1.1691E+02	.02061	1.1702E+02
.02091	1.1712E+02	.02121	1.1724E+02	.02151	1.1736E+02	.02181	1.1748E+02	.02212	1.1752E+02
.02242	1.1767E+02	.02272	1.1772E+02	.02302	1.1790E+02	.02332	1.1800E+02	.02362	1.1811E+02
.02393	1.1816E+02	.02423	1.1822E+02	.02453	1.1832E+02	.02483	1.1844E+02	.02513	1.1858E+02
.02543	1.1866E+02	.02573	1.1866E+02	.02603	1.1878E+02	.02633	1.1885E+02	.02663	1.1891E+02
.02694	1.1898E+02	.02724	1.1903E+02	.02754	1.1918E+02	.02784	1.1917E+02	.02814	1.1923E+02
.02844	1.1939E+02	.02874	1.1942E+02	.02904	1.1951E+02	.02934	1.1949E+02	.02964	1.1963E+02
.02994	1.1964E+02	.03024	1.1972E+02	.03054	1.1975E+02	.03084	1.1984E+02	.03114	1.1988E+02
.03144	1.1996E+02	.03174	1.2003E+02	.03204	1.2009E+02	.03234	1.2016E+02	.03264	1.2021E+02
.03294	1.2027E+02	.03324	1.2034E+02	.03354	1.2039E+02	.03384	1.2045E+02	.03414	1.2051E+02
.03444	1.2056E+02	.03474	1.2062E+02	.03504	1.2068E+02	.03534	1.2074E+02	.03564	1.2080E+02
.03594	1.2084E+02	.03624	1.2090E+02	.03654	1.2095E+02	.03684	1.2101E+02	.03714	1.2107E+02
.03744	1.2113E+02	.03774	1.2118E+02	.03804	1.2123E+02	.03834	1.2129E+02	.03863	1.2135E+02
.03893	1.2140E+02	.03923	1.2145E+02	.03953	1.2150E+02	.03983	1.2156E+02	.04013	1.2161E+02
.04043	1.2166E+02	.04073	1.2171E+02	.04103	1.2177E+02	.04133	1.2181E+02	.04163	1.2187E+02
.04193	1.2193E+02	.04223	1.2198E+02	.04253	1.2203E+02	.04283	1.2208E+02	.04312	1.2213E+02
.04342	1.2218E+02	.04372	1.2223E+02	.04402	1.2228E+02	.04432	1.2234E+02	.04462	1.2239E+02
.04492	1.2244E+02	.04522	1.2249E+02	.04552	1.2254E+02	.04582	1.2259E+02	.04612	1.2265E+02
.04641	1.2269E+02	.04671	1.2275E+02	.04701	1.2280E+02	.04731	1.2285E+02	.04761	1.2290E+02
.04791	1.2294E+02	.04821	1.2300E+02	.04851	1.2305E+02	.04881	1.2309E+02	.04911	1.2315E+02
.04941	1.2319E+02	.04970	1.2325E+02	.05000	1.2329E+02	.05049	1.2335E+02	.05098	1.2364E+02
.06492	1.2127E+02	.06999	1.1290E+02	.07477	1.0062E+02	.07984	8.6850E+01	.08492	7.4590E+01
.08999	6.4470E+01	.09475	5.6760E+01	.09982	5.0160E+01	.10490	4.4870E+01	.11000	4.0606E+01
.11480	3.7343E+01	.11980	3.4507E+01	.12490	3.2174E+01	.13000	3.0259E+01	.13470	2.8746E+01
.13980	2.7410E+01	.14490	2.6289E+01	.15000	2.5453E+01	.15470	2.5171E+01	.15980	2.5790E+01
.16490	2.7673E+01	.17000	3.2881E+01	.17480	4.2823E+01	.17980	5.7660E+01	.18490	7.4210E+01
.19000	9.0430E+01	.19480	1.0431E+02	.19980	1.1700E+02	.20490	1.2700E+02	.21000	1.3240E+02
.21470	1.3161E+02	.21980	1.2561E+02	.22480	1.1754E+02	.22980	1.0947E+02	.23480	1.0218E+02
.23980	9.5800E+01	.24480	9.0210E+01	.24980	8.5260E+01	.25480	8.0880E+01	.25970	7.6920E+01
.26500	7.3050E+01	.26990	6.9810E+01	.27490	6.6880E+01	.27990	6.4210E+01	.28480	6.1750E+01
.28980	5.9470E+01	.29470	5.7360E+01	.30000	5.5270E+01	.30490	5.3430E+01	.30990	5.1690E+01
.31480	5.0070E+01	.31980	4.8540E+01	.32470	4.7120E+01	.33000	4.5730E+01	.33500	4.4530E+01
.33990	4.3430E+01	.34490	4.2420E+01	.34980	4.1490E+01	.35480	4.0600E+01	.35970	3.9750E+01
.36500	3.8880E+01	.36990	3.8090E+01	.37490	3.7320E+01	.37980	3.6570E+01	.38470	3.5900E+01
.39000	3.5200E+01	.39490	3.4590E+01	.39980	3.4050E+01	.40500	3.3570E+01	.40990	3.3230E+01
.41470	3.3020E+01	.41990	3.2960E+01	.42500	3.3050E+01	.42980	3.3250E+01	.43490	3.3500E+01
.43970	3.3730E+01	.44480	3.3970E+01	.44980	3.4170E+01	.45490	3.4360E+01	.45990	3.4550E+01
.46470	3.4710E+01	.46980	3.4870E+01	.47480	3.5040E+01	.47980	3.5190E+01	.48490	3.5330E+01
.48990	3.5460E+01	.49500	3.5590E+01	.50000	3.5710E+01	.50500	3.5810E+01	.51000	3.5910E+01
.51470	3.6000E+01	.51970	3.6090E+01	.52500	3.6170E+01	.53000	3.6240E+01	.53500	3.6300E+01
.54000	3.6330E+01	.54500	3.6350E+01	.55000	3.6350E+01	.55500	3.6300E+01	.56000	3.6390E+01
.56500	3.6330E+01	.57000	3.5860E+01	.57500	3.5160E+01	.58000	3.4060E+01	.58500	3.2450E+01
.59000	3.0260E+01	.59500	2.7520E+01	.60000	2.4520E+01	.60500	2.2237E+01	.61000	2.0154E+01
.61500	1.8618E+01	.62000	1.7791E+01	.62500	1.7893E+01	.62980	1.8920E+01	.63480	2.0773E+01

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.63990	2.2740E+01	.64500	2.4660E+01	.64980	2.6510E+01	.65500	2.8330E+01	.65990	2.9940E+01
.66480	3.1330E+01	.67000	3.2470E+01	.67500	3.3340E+01	.67990	3.4080E+01	.68480	3.4760E+01
.68980	3.5400E+01	.69480	3.5970E+01	.69970	3.6440E+01	.70500	3.6790E+01	.70990	3.7050E+01
.71490	3.7260E+01	.71990	3.7490E+01	.72480	3.7690E+01	.72980	3.7870E+01	.73470	3.8020E+01
.74000	3.8160E+01	.74490	3.8260E+01	.74990	3.8340E+01	.75480	3.8380E+01	.75980	3.8400E+01
.76500	3.8400E+01	.76990	3.8350E+01	.77490	3.8290E+01	.77980	3.8210E+01	.78480	3.8110E+01
.78970	3.7990E+01	.79500	3.7870E+01	.79990	3.7760E+01	.80490	3.7670E+01	.80980	3.7580E+01
.81480	3.7530E+01	.81980	3.7480E+01	.82500	3.7450E+01	.83000	3.7440E+01	.83490	3.7430E+01
.83990	3.7420E+01	.84480	3.7410E+01	.84980	3.7390E+01	.85470	3.7360E+01	.86000	3.7340E+01
.86490	3.7310E+01	.86990	3.7270E+01	.87480	3.7230E+01	.87980	3.7200E+01	.88470	3.7160E+01
.89000	3.7150E+01	.89490	3.7150E+01	.89990	3.7160E+01	.90490	3.7200E+01	.90980	3.7260E+01
.91480	3.7340E+01	.92000	3.7460E+01	.92500	3.7590E+01	.92990	3.7750E+01	.93490	3.7910E+01
.93980	3.8080E+01	.94480	3.8230E+01	.94970	3.8360E+01	.95500	3.8450E+01	.95990	3.8490E+01
.96490	3.8470E+01	.96980	3.8380E+01	.97480	3.8240E+01	.97970	3.8060E+01	.98500	3.7800E+01
.98990	3.7550E+01	.99490	3.7290E+01	.99980	3.7030E+01	1.00500	3.6640E+01	1.01000	3.6230E+01
1.01500	3.5880E+01	1.02000	3.5570E+01	1.02500	3.5260E+01	1.03000	3.4980E+01	1.03500	3.4720E+01
1.04000	3.4470E+01	1.04500	3.4200E+01	1.05000	3.3930E+01	1.05500	3.3640E+01	1.06000	3.3310E+01
1.06500	3.2980E+01	1.07000	3.2630E+01	1.07500	3.2240E+01	1.08000	3.1870E+01	1.08500	3.1450E+01
1.09000	3.1020E+01	1.09500	3.0590E+01	1.10000	3.0150E+01	1.10500	2.9680E+01	1.11000	2.9200E+01
1.11500	2.8700E+01	1.12000	2.8180E+01	1.12500	2.7630E+01	1.13000	2.7081E+01	1.13500	2.6489E+01
1.14000	2.5924E+01	1.14500	2.5317E+01	1.15000	2.4732E+01	1.15500	2.4108E+01	1.16000	2.3491E+01
1.16500	2.2906E+01	1.17000	2.2282E+01	1.17500	2.1645E+01	1.18000	2.0985E+01	1.18500	2.0344E+01
1.19000	1.9633E+01	1.19500	1.8910E+01	1.20000	1.8147E+01	1.20500	1.7362E+01	1.21000	1.6548E+01
1.21500	1.5703E+01	1.22000	1.4871E+01	1.22500	1.3953E+01	1.23000	1.3011E+01	1.23500	1.2021E+01
1.24000	1.0805E+01	1.24500	9.5170E+00	1.25000	8.1630E+00	1.25500	6.7600E+00	1.26000	5.2090E+00
1.26500	3.6800E+00	1.27000	2.0890E+00	1.27500	4.2900E-01	1.28000	-1.3050E+00	1.28500	-3.1290E+00
1.29000	-5.1530E+00	1.29500	-7.1930E+00	1.30000	-9.3800E+00	1.30500	-1.1526E+01	1.31000	-1.3547E+01
1.31500	-1.5673E+01	1.32000	-1.9103E+01	1.32500	-2.2553E+01	1.33000	-2.6190E+01	1.33500	-3.0310E+01
1.34000	-3.4520E+01	1.34500	-3.9210E+01	1.35000	-4.3800E+01	1.35500	-4.8760E+01	1.36000	-5.3530E+01
1.36500	-5.8600E+01	1.37000	-6.3470E+01	1.37500	-6.8660E+01	1.38000	-7.3890E+01	1.38500	-7.8890E+01
1.39000	-8.4100E+01	1.39500	-8.8740E+01	1.40000	-9.3110E+01	1.40500	-9.7040E+01	1.41000	-1.0053E+02
1.41500	-1.0426E+02	1.42000	-1.0828E+02	1.42500	-1.1332E+02	1.43000	-1.1864E+02	1.43500	-1.2398E+02
1.44000	-1.2939E+02	1.44500	-1.3509E+02	1.45000	-1.4061E+02	1.45500	-1.3451E+02	1.46000	-1.2715E+02
1.46500	-1.1902E+02	1.47000	-1.0986E+02	1.47500	-9.9239E+01	1.48000	-8.6773E+01	1.48500	-7.3138E+01
1.49000	-5.9866E+01	1.49500	-4.5839E+01	1.50000	-3.0245E+01	1.50500	-2.0563E+01	1.51000	-1.8691E+01
1.51500	-1.9159E+01	1.52000	-2.0996E+01	1.52500	-2.3681E+01	1.53000	-2.7285E+01	1.53500	-3.1163E+01
1.54000	-3.5272E+01	1.54500	-3.8694E+01	1.55000	-4.2056E+01	1.55500	-4.4814E+01	1.56000	-4.6540E+01
1.56500	-4.6810E+01	1.57000	-4.5170E+01	1.57500	-4.1900E+01	1.58000	-3.6680E+01	1.58500	-3.0136E+01
1.59000	-2.2787E+01	1.59500	-1.5713E+01	1.60000	-7.8680E+00	1.60500	-7.6200E-01	1.61000	6.8230E+00
1.61500	1.3667E+01	1.62000	2.1025E+01	1.62500	2.7451E+01	1.63000	3.3201E+01	1.63500	3.8148E+01
1.64000	4.1035E+01	1.64500	4.2946E+01	1.65000	4.6657E+01	1.65500	4.9206E+01	1.66000	5.1579E+01
1.66500	5.3842E+01	1.67000	5.5650E+01	1.67500	5.7640E+01	1.68000	5.8940E+01	1.68500	5.9270E+01
1.69000	5.7990E+01	1.69500	5.5130E+01	1.70000	5.1640E+01	1.70500	4.7897E+01	1.71000	4.4107E+01
1.71500	4.0506E+01	1.72000	3.7256E+01	1.72500	3.4522E+01	1.73000	3.2422E+01	1.73500	3.0858E+01
1.74000	3.0207E+01	1.74500	3.0125E+01	1.75000	3.0269E+01	1.75500	3.1129E+01	1.76000	3.2798E+01
1.76500	3.5032E+01	1.77000	3.7581E+01	1.77500	4.0220E+01	1.78000	4.1910E+01	1.78500	4.2540E+01
1.79000	4.1870E+01	1.79500	3.9822E+01	1.80000	3.6614E+01	1.80500	3.4343E+01	1.81000	3.1888E+01
1.81500	2.7645E+01	1.82000	2.1455E+01	1.82500	1.4173E+01	1.83000	6.2400E+00	1.83500	-1.7490E+00
1.84000	-9.2510E+00	1.84500	-1.7190E+01	1.85000	-2.2494E+01	1.85500	-2.7928E+01	1.86000	-3.2458E+01
1.86500	-3.5296E+01	1.87000	-3.8042E+01	1.87500	-4.1082E+01	1.88000	-4.3645E+01	1.88500	-4.5187E+01
1.89000	-4.6190E+01	1.89500	-4.6729E+01	1.90000	-4.6901E+01	1.90500	-4.6629E+01	1.91000	-4.5800E+01
1.91500	-4.4180E+01	1.92000	-4.2366E+01	1.92500	-4.0265E+01	1.93000	-3.7502E+01	1.93500	-3.4713E+01
1.94000	-3.1579E+01	1.94500	-2.8794E+01	1.95000	-2.6007E+01	1.95500	-2.3980E+01	1.96000	-2.2618E+01
1.96500	-2.2449E+01	1.97000	-2.3514E+01	1.97500	-2.5414E+01	1.98000	-2.7782E+01	1.98500	-3.0670E+01
1.99000	-3.3598E+01	1.99500	-3.7106E+01	2.00000	-4.0241E+01	2.00500	-4.2997E+01	2.01000	-4.4370E+01
2.01500	-4.4280E+01	2.02000	-4.2290E+01	2.02500	-3.8340E+01	2.03000	-3.3293E+01	2.03500	-2.6721E+01
2.04000	-1.9657E+01	2.04500	-1.2951E+01	2.05000	-5.0900E+00	2.05500	3.2790E+00	2.06000	1.1733E+01
2.06500	1.8928E+01	2.07000	2.5762E+01	2.07500	3.0761E+01	2.08000	3.4930E+01	2.08500	3.7630E+01
2.09000	3.8881E+01	2.09500	3.8779E+01	2.10000	3.8131E+01	2.10500	3.7101E+01	2.11000	3.5532E+01
2.11500	3.5666E+01	2.12000	3.4737E+01	2.12500	3.3703E+01	2.13000	3.2568E+01	2.13500	3.1157E+01
2.14000	2.9688E+01	2.14500	2.7794E+01	2.15000	2.6181E+01	2.15500	2.4609E+01	2.16000	2.3281E+01
2.16500	2.2034E+01	2.17000	2.1205E+01	2.17500	2.0751E+01	2.18000	2.0829E+01	2.18500	2.1382E+01
2.19000	2.2483E+01	2.19500	2.3882E+01	2.20000	2.5862E+01	2.20500	2.8186E+01	2.21000	3.0958E+01
2.21500	3.2859E+01	2.22000	3.4771E+01	2.22500	3.7114E+01	2.23000	3.8570E+01	2.23500	3.8950E+01
2.24000	3.8210E+01	2.24500	3.6310E+01	2.25000	3.3461E+01	2.25500	2.8808E+01	2.26000	2.2187E+01
2.26500	1.4775E+01	2.27000	6.8570E+00	2.27500	-5.4700E-01	2.28000	-1.0118E+01	2.28500	-1.6340E+01

2.29000	-2.1899E+01	2.29500	-2.6682E+01	2.30000	-3.0158E+01	2.30500	-3.2647E+01	2.31000	-3.3827E+01
2.31500	-3.4495E+01	2.32000	-3.4310E+01	2.32500	-3.3392E+01	2.33000	-3.2076E+01	2.33500	-3.0301E+01
2.34000	-2.8431E+01	2.34500	-2.7013E+01	2.35000	-2.5927E+01	2.35500	-2.4817E+01	2.36000	-2.3832E+01
2.36500	-2.2830E+01	2.37000	-2.1830E+01	2.37500	-2.0867E+01	2.38000	-1.9732E+01	2.38500	-1.8580E+01
2.39000	-1.7602E+01	2.39500	-1.6762E+01	2.40000	-1.6317E+01	2.40500	-1.6479E+01	2.41000	-1.7273E+01
2.41500	-1.8853E+01	2.42000	-2.1008E+01	2.42500	-2.3447E+01	2.43000	-2.6673E+01	2.43500	-3.0251E+01
2.44000	-3.3541E+01	2.44500	-3.6800E+01	2.45000	-3.9046E+01	2.45500	-3.9851E+01	2.46000	-3.9220E+01
2.46500	-3.7010E+01	2.47000	-3.3250E+01	2.47500	-2.8668E+01	2.48000	-2.2606E+01	2.48500	-1.5567E+01
2.49000	-7.7160E+00	2.49500	-1.6300E-01	2.50000	8.1980E+00	2.50500	1.6020E+01	2.51000	2.2078E+01
2.51500	2.7189E+01	2.52000	3.0719E+01	2.52500	3.2743E+01	2.53000	3.3855E+01	2.53500	3.3950E+01
2.54000	3.3009E+01	2.54500	3.0998E+01	2.55000	2.8655E+01	2.55500	2.6116E+01	2.56000	2.3830E+01
2.56500	2.1631E+01	2.57000	2.1080E+01	2.57500	2.0044E+01	2.58000	1.9098E+01	2.58500	1.8093E+01
2.59000	1.7065E+01	2.59500	1.6117E+01	2.60000	1.5223E+01	2.60500	1.4625E+01	2.61000	1.4280E+01
2.61500	1.4165E+01	2.62000	1.4424E+01	2.62500	1.5128E+01	2.63000	1.6168E+01	2.63500	1.7793E+01
2.64000	1.9996E+01	2.64500	2.2586E+01	2.65000	2.6003E+01	2.65500	2.9377E+01	2.66000	3.2647E+01
2.66500	3.4899E+01	2.67000	3.6002E+01	2.67500	3.6207E+01	2.68000	3.5750E+01	2.68500	3.4420E+01
2.69000	3.1860E+01	2.69500	2.7690E+01	2.70000	2.0653E+01	2.70500	9.8070E+00	2.71000	3.0000E-01
2.71500	-7.2840E+00	2.72000	-1.7333E+01	2.72500	-1.7536E+01	2.73000	-2.0662E+01	2.73500	-2.3848E+01
2.74000	-2.6520E+01	2.74500	-2.3535E+01	2.75000	-2.9948E+01	2.75500	-3.0309E+01	2.76000	-2.8714E+01
2.76500	-2.5266E+01	2.77000	-2.2176E+01	2.77500	-2.0043E+01	2.78000	-1.8830E+01	2.78500	-1.8086E+01
2.79000	-1.7485E+01	2.79500	-1.6787E+01	2.80000	-1.6021E+01	2.80500	-1.5227E+01	2.81000	-1.4446E+01
2.81500	-1.3739E+01	2.82000	-1.3129E+01	2.82500	-1.2598E+01	2.83000	-1.2146E+01	2.83500	-1.1847E+01
2.84000	-1.1817E+01	2.84500	-1.1187E+01	2.85000	-1.2922E+01	2.85500	-1.4209E+01	2.86000	-1.6214E+01
2.86500	-1.9353E+01	2.87000	-2.3597E+01	2.87500	-2.8035E+01	2.88000	-3.1684E+01	2.88500	-3.4111E+01
2.89000	-3.5361E+01	2.89500	-3.5577E+01	2.90000	-3.4841E+01	2.90500	-3.3140E+01	2.91000	-3.0390E+01
2.91500	-2.6340E+01	2.92000	-2.0480E+01	2.92500	-1.2662E+01	2.93000	-4.5100E+00	2.93500	4.3610E+00
2.94000	1.2042E+01	2.94500	1.8027E+01	2.95000	2.2360E+01	2.95500	2.5413E+01	2.96000	2.7526E+01
2.96500	2.8863E+01	2.97000	2.9312E+01	2.97500	2.8679E+01	2.98000	2.6978E+01	2.98500	2.4551E+01
2.99000	2.1929E+01	2.99500	1.9524E+01	3.00000	1.7257E+01				

TIME FUNCTION NUMBER = (3)
 FUNCTION DESCRIPTION = (TH-3 NODE 101 FORCE VS TIME
 NUMBER OF ABSCESSAS = (758)
 FUNCTION SCALE FACTOR = (.1000E+04)

TIME VALUE	FUNCTION	TIME VALUE	FUNCTION	TIME VALUE	FUNCTION	TIME VALUE	FUNCTION	TIME VALUE	FUNCTION
00000	1.2000E-02	00040	1.2000E-02	00060	1.2000E-02	00080	1.2000E-02	00100	1.2000E-02
00100	1.3000E-02	00162	1.4000E-02	00194	1.4000E-02	00225	1.4000E-02	00256	1.4000E-02
00256	1.4000E-02	00319	1.3000E-02	00350	1.3000E-02	00381	1.2000E-02	00411	1.2000E-02
00411	1.2000E-02	00442	1.2000E-02	00473	1.2000E-02	00504	1.2000E-02	00535	1.2000E-02
00535	1.2000E-02	00566	1.2000E-02	00596	1.2000E-02	00627	1.2000E-02	00658	1.2000E-02
00658	1.2000E-02	00719	1.2000E-02	00750	1.2000E-02	00781	1.2000E-02	00812	1.2000E-02
00812	1.0000E-02	00873	1.0000E-02	00904	1.0000E-02	00935	1.0000E-02	00966	1.0000E-02
00966	1.0000E-02	01027	1.0000E-02	01058	1.0000E-02	01088	1.0000E-02	01119	1.0000E-02
01088	1.0000E-02	01180	1.0000E-02	01211	1.0000E-02	01241	1.0000E-02	01272	1.0000E-02
01241	1.0000E-02	01333	1.0000E-02	01364	1.0000E-02	01394	1.0000E-02	01425	1.0000E-02
01425	1.0000E-02	01485	1.0000E-02	01516	1.0000E-02	01546	1.0000E-02	01576	1.0000E-02
01576	1.0000E-02	01637	1.0000E-02	01667	1.0000E-02	01698	1.0000E-02	01728	1.0000E-02
01728	1.0000E-02	01789	1.0000E-02	01819	1.0000E-02	01849	1.0000E-02	01879	1.0000E-02
01879	1.0000E-02	01940	1.0000E-02	01970	1.0000E-02	02000	1.0000E-02	02031	1.0000E-02
02031	1.0000E-02	02091	1.0000E-02	02121	1.0000E-02	02151	1.0000E-02	02181	1.0000E-02
02181	1.0000E-02	02242	1.0000E-02	02272	1.0000E-02	02302	1.0000E-02	02332	1.0000E-02
02332	1.0000E-02	02393	1.0000E-02	02423	1.0000E-02	02453	1.0000E-02	02483	1.0000E-02
02483	1.0000E-02	02543	1.0000E-02	02573	1.0000E-02	02603	1.0000E-02	02633	1.0000E-02
02633	1.0000E-02	02694	1.0000E-02	02724	1.0000E-02	02754	1.0000E-02	02784	1.0000E-02
02784	1.0000E-02	02844	1.0000E-02	02874	1.0000E-02	02904	1.0000E-02	02934	1.0000E-02
02934	1.0000E-02	02994	1.0000E-02	03024	1.0000E-02	03054	1.0000E-02	03084	1.0000E-02
03084	1.0000E-02	03144	1.0000E-02	03174	1.0000E-02	03204	1.0000E-02	03234	1.0000E-02
03234	1.0000E-02	03294	1.0000E-02	03324	1.0000E-02	03354	1.0000E-02	03384	1.0000E-02
03384	1.0000E-02	03444	1.0000E-02	03474	1.0000E-02	03504	1.0000E-02	03534	1.0000E-02
03534	1.0000E-02	03594	1.0000E-02	03624	1.0000E-02	03654	1.0000E-02	03684	1.0000E-02
03684	1.0000E-02	03744	1.0000E-02	03774	1.0000E-02	03804	1.0000E-02	03833	1.0000E-02
03833	1.0000E-02	03893	1.0000E-02	03923	1.0000E-02	03953	1.0000E-02	03983	1.0000E-02
03983	1.0000E-02	04043	1.0000E-02	04073	1.0000E-02	04103	1.0000E-02	04133	1.0000E-02
04133	1.0000E-02	04193	1.0000E-02	04223	1.0000E-02	04253	1.0000E-02	04282	1.0000E-02
04282	1.0000E-02	04342	1.0000E-02	04372	1.0000E-02	04402	1.0000E-02	04432	1.0000E-02
04432	1.0000E-02	04492	1.0000E-02	04522	1.0000E-02	04552	1.0000E-02	04582	1.0000E-02
04582	1.0000E-02	04641	1.0000E-02	04671	1.0000E-02	04701	1.0000E-02	04731	1.0000E-02
04731	1.0000E-02	04791	1.0000E-02	04821	1.0000E-02	04851	1.0000E-02	04881	1.0000E-02
04881	1.0000E-02	04941	1.0000E-02	04971	1.0000E-02	05000	1.0000E-02	05030	1.0000E-02
05030	1.0000E-02	06492	1.0000E-02	06999	1.0000E-02	07477	1.0000E-02	07984	1.0000E-02
07984	1.0000E-02	08999	1.0000E-02	09475	1.0000E-02	09982	3.9000E+00	10490	2.8000E+01
10490	2.8000E+01	11480	2.2300E+00	11980	3.9610E+00	12490	8.4710E+00	13000	1.4840E+01
13000	1.4840E+01	13980	2.1590E+01	14490	2.1790E+01	15000	2.0810E+01	15470	1.9450E+01
15470	1.9450E+01	16490	1.6350E+01	17000	1.8950E+01	17480	1.3770E+01	17980	1.2670E+01
17980	1.2670E+01	18490	1.140E+01	19000	1.0220E+01	19480	9.5620E+00	20490	8.9610E+00
20490	8.9610E+00	21470	8.0380E+00	21980	7.6310E+00	22480	7.2680E+00	22980	6.9440E+00
22980	6.9440E+00	23980	6.3890E+00	24480	6.1490E+00	24980	5.9310E+00	25480	5.7180E+00
25480	5.7180E+00	26500	5.250E+00	26990	5.2070E+00	27490	5.0580E+00	27990	4.9180E+00
27990	4.9180E+00	28980	4.6590E+00	29470	4.5380E+00	30000	4.4160E+00	30490	4.3050E+00
30490	4.3050E+00	31480	4.140E+00	31980	3.9940E+00	32470	3.8980E+00	33000	3.8000E+00
33000	3.8000E+00	33990	3.6260E+00	34490	3.5460E+00	34980	3.4700E+00	35480	3.3990E+00
35480	3.3990E+00	36500	3.2710E+00	36990	3.2170E+00	37490	3.1690E+00	37980	3.1260E+00
37980	3.1260E+00	39000	3.0520E+00	39490	3.0230E+00	39980	2.9980E+00	40500	2.9750E+00
40500	2.9750E+00	41470	2.9400E+00	41980	2.9250E+00	42500	2.9120E+00	42980	2.900E+00
42980	2.900E+00	43970	2.8800E+00	44480	2.8710E+00	44980	2.8630E+00	45490	2.8550E+00
45490	2.8550E+00	46470	2.8410E+00	46980	2.8340E+00	47480	2.8270E+00	47980	2.8210E+00
47980	2.8210E+00	48990	2.8060E+00	49500	2.7980E+00	50000	2.7860E+00	50500	2.7700E+00
50500	2.7700E+00	51470	2.760E+00	51980	2.750E+00	52500	2.740E+00	53000	2.720E+00
53000	2.720E+00	54000	1.6050E+00	54500	1.0340E+00	55000	3.6100E-01	55500	3.0300E-01
55500	3.0300E-01	56500	8.9700E-01	57000	-6.7600E-01	57500	-3.2500E-01	58000	-2.1000E-02
58000	-2.1000E-02	59000	9.1200E-01	59500	1.2710E+00	60000	1.4730E+00	60500	1.5910E+00
60500	1.5910E+00	61500	1.7960E+00	62000	1.9840E+00	62500	2.2900E+00	63000	2.520E+00
63000	2.520E+00	63480	2.6340E+00	64000	2.790E+00	64500	2.950E+00	65000	3.120E+00
65000	3.120E+00	65480	3.290E+00	66000	3.460E+00	66500	3.640E+00	67000	3.830E+00
67000	3.830E+00	67480	4.030E+00	68000	4.230E+00	68500	4.430E+00	69000	4.640E+00
69000	4.640E+00	69480	4.860E+00	70000	5.100E+00	70500	5.350E+00	71000	5.610E+00
71000	5.610E+00	71480	5.890E+00	72000	6.190E+00	72500	6.500E+00	73000	6.820E+00
73000	6.820E+00	73480	7.150E+00	74000	7.530E+00	74500	7.930E+00	75000	8.350E+00
75000	8.350E+00	75480	8.800E+00	76000	9.270E+00	76500	1.0250E+01	77000	1.1350E+01
77000	1.1350E+01	77480	1.2490E+01	78000	1.3760E+01	78500	1.5170E+01	79000	1.6600E+01
79000	1.6600E+01	79480	1.8190E+01	80000	2.0810E+01	80500	2.3500E+01	81000	2.690E+01
81000	2.690E+01	81480	3.060E+01	82000	3.540E+01	82500	4.150E+01	83000	4.860E+01
83000	4.860E+01	83480	5.740E+01	84000	6.850E+01	84500	8.200E+01	85000	9.850E+01
85000	9.850E+01	85480	1.190E+02	86000	1.440E+02	86500	1.740E+02	87000	2.140E+02
87000	2.140E+02	87480	2.690E+02	88000	3.400E+02	88500	4.300E+02	89000	5.400E+02
89000	5.400E+02	89480	6.800E+02	90000	8.500E+02	90500	1.070E+03	91000	1.370E+03
91000	1.370E+03	91480	1.760E+03	92000	2.290E+03	92500	2.970E+03	93000	3.900E+03
93000	3.900E+03	93480	5.100E+03	94000	6.700E+03	94500	8.800E+03	95000	1.160E+04
95000	1.160E+04	95480	1.540E+04	96000	2.080E+04	96500	2.850E+04	97000	3.850E+04
97000	3.850E+04	97480	5.100E+04	98000	6.800E+04	98500	9.100E+04	99000	1.210E+05
99000	1.210E+05	99480	1.590E+05	100000	2.150E+05	100500	2.900E+05	101000	3.900E+05

.63990	2.4210E+00	.64500	2.4530E+00	.64980	2.4910E+00	.65500	2.5340E+00	.65990	2.5730E+00
.66480	2.6080E+00	.67000	2.6410E+00	.67500	2.6680E+00	.67990	2.6930E+00	.68480	2.7150E+00
.68980	2.7350E+00	.69480	2.7530E+00	.69970	2.7690E+00	.70500	2.7840E+00	.70990	2.7970E+00
.71490	2.8070E+00	.71990	2.8150E+00	.72480	2.8210E+00	.72980	2.8250E+00	.73470	2.8280E+00
.74000	2.8290E+00	.74490	2.8290E+00	.74990	2.8300E+00	.75480	2.8310E+00	.75980	2.8330E+00
.76500	2.8370E+00	.76990	2.8410E+00	.77490	2.8460E+00	.77980	2.8500E+00	.78480	2.8530E+00
.78970	2.8550E+00	.79500	2.8550E+00	.79990	2.8540E+00	.80490	2.8510E+00	.80980	2.8480E+00
.81480	2.8440E+00	.81980	2.8400E+00	.82500	2.8370E+00	.83000	2.8350E+00	.83490	2.8350E+00
.83990	2.8360E+00	.84480	2.8400E+00	.84980	2.8460E+00	.85470	2.8570E+00	.86000	2.8730E+00
.86490	2.8930E+00	.86990	2.9180E+00	.87480	2.9470E+00	.87980	2.9790E+00	.88470	3.0120E+00
.89000	3.0440E+00	.89490	3.0700E+00	.89990	3.0880E+00	.90490	3.0960E+00	.90980	3.0940E+00
.91480	3.0800E+00	.92000	3.0520E+00	.92500	3.0160E+00	.92990	2.9720E+00	.93490	2.9250E+00
.93980	2.8770E+00	.94480	2.8330E+00	.94970	2.7950E+00	.95500	2.7640E+00	.95990	2.7440E+00
.96490	2.7320E+00	.96980	2.7260E+00	.97480	2.7240E+00	.97970	2.7240E+00	.98500	2.7250E+00
.98990	2.7250E+00	.99490	2.7240E+00	.99980	2.7220E+00	1.00500	2.7190E+00	1.01000	2.7140E+00
1.01500	2.7100E+00	1.02000	2.7050E+00	1.02500	2.6990E+00	1.03000	2.6940E+00	1.03500	2.6890E+00
1.04000	2.6840E+00	1.04500	2.6790E+00	1.05000	2.6750E+00	1.05500	2.6710E+00	1.06000	2.6680E+00
1.06500	2.6650E+00	1.07000	2.6620E+00	1.07500	2.6600E+00	1.08000	2.6590E+00	1.08500	2.6580E+00
1.09000	2.6570E+00	1.09500	2.6570E+00	1.10000	2.6570E+00	1.10500	2.6580E+00	1.11000	2.6580E+00
1.11500	2.6590E+00	1.12000	2.6590E+00	1.12500	2.6600E+00	1.13000	2.6600E+00	1.13500	2.6610E+00
1.14000	2.6610E+00	1.14500	2.6620E+00	1.15000	2.6630E+00	1.15500	2.6640E+00	1.16000	2.6650E+00
1.16500	2.6650E+00	1.17000	2.6660E+00	1.17500	2.6670E+00	1.18000	2.6670E+00	1.18500	2.6680E+00
1.19000	2.6680E+00	1.19500	2.6670E+00	1.20000	2.6670E+00	1.20500	2.6660E+00	1.21000	2.6640E+00
1.21500	2.6620E+00	1.22000	2.6590E+00	1.22500	2.6550E+00	1.23000	2.6490E+00	1.23500	2.6390E+00
1.24000	2.6240E+00	1.24500	2.6000E+00	1.25000	2.5620E+00	1.25500	2.5070E+00	1.26000	2.4270E+00
1.26500	2.3280E+00	1.27000	2.2090E+00	1.27500	2.0750E+00	1.28000	1.9330E+00	1.28500	1.7910E+00
1.29000	1.6500E+00	1.29500	1.5270E+00	1.30000	1.4170E+00	1.30500	1.3120E+00	1.31000	1.2180E+00
1.31500	1.1260E+00	1.32000	1.0280E+00	1.32500	9.3100E-01	1.33000	8.3100E-01	1.33500	7.1900E-01
1.34000	6.0700E-01	1.34500	4.8200E-01	1.35000	3.5300E-01	1.35500	2.0500E-01	1.36000	5.8000E-02
1.36500	-7.8000E-02	1.37000	-2.3300E-01	1.37500	-7.1200E-01	1.38000	-1.8660E+00	1.38500	-3.1370E+00
1.39000	-3.9040E+00	1.39500	-4.1090E+00	1.40000	-4.5990E+00	1.40500	-5.3790E+00	1.41000	-5.6790E+00
1.41500	-5.9070E+00	1.42000	-5.9010E+00	1.42500	-5.9660E+00	1.43000	-6.5110E+00	1.43500	-6.6570E+00
1.44000	-7.2390E+00	1.44500	-7.9900E+00	1.45000	-8.9620E+00	1.45500	-1.0320E+01	1.46000	-1.2570E+01
1.46500	-1.5600E+01	1.47000	-1.8620E+01	1.47500	-2.0870E+01	1.48000	-2.2160E+01	1.48500	-2.2860E+01
1.49000	-2.3320E+01	1.49500	-2.3730E+01	1.50000	-2.3640E+01	1.50500	-2.2950E+01	1.51000	-2.2330E+01
1.51500	-2.1830E+01	1.52000	-2.1360E+01	1.52500	-2.0980E+01	1.53000	-2.0590E+01	1.53500	-2.0220E+01
1.54000	-1.9120E+01	1.54500	-1.2400E+01	1.55000	-3.8400E+00	1.55500	-4.4700E-01	1.56000	5.7600E-01
1.56500	1.1780E+00	1.57000	1.7820E+00	1.57500	2.1950E+00	1.58000	2.4750E+00	1.58500	2.7310E+00
1.59000	2.9970E+00	1.59500	3.2180E+00	1.60000	3.4050E+00	1.60500	3.4880E+00	1.61000	3.5200E+00
1.61500	3.5750E+00	1.62000	3.7030E+00	1.62500	3.8620E+00	1.63000	4.0530E+00	1.63500	4.2930E+00
1.64000	4.6040E+00	1.64500	4.9890E+00	1.65000	5.4790E+00	1.65500	6.1270E+00	1.66000	6.9260E+00
1.66500	7.8150E+00	1.67000	8.6180E+00	1.67500	9.3890E+00	1.68000	9.9450E+00	1.68500	1.0300E+01
1.69000	9.4560E+00	1.69500	9.0880E+00	1.70000	9.4800E+00	1.70500	9.8730E+00	1.71000	1.0200E+01
1.71500	1.0480E+01	1.72000	1.0650E+01	1.72500	1.0700E+01	1.73000	1.0480E+01	1.73500	1.0150E+01
1.74000	9.9200E+00	1.74500	9.6540E+00	1.75000	9.1900E+00	1.75500	8.7040E+00	1.76000	8.3700E+00
1.76500	8.1100E+00	1.77000	7.8440E+00	1.77500	7.5410E+00	1.78000	7.2440E+00	1.78500	6.9180E+00
1.79000	6.6360E+00	1.79500	6.2830E+00	1.80000	5.8100E+00	1.80500	5.1620E+00	1.81000	4.3870E+00
1.81500	3.3680E+00	1.82000	2.2690E+00	1.82500	1.2220E+00	1.83000	3.5500E-01	1.83500	-2.8100E-01
1.84000	-7.4700E-01	1.84500	-1.1140E+00	1.85000	-1.4200E+00	1.85500	-1.6840E+00	1.86000	-1.9130E+00
1.86500	-2.1080E+00	1.87000	-2.2840E+00	1.87500	-2.4730E+00	1.88000	-2.7200E+00	1.88500	-3.0280E+00
1.89000	-3.4730E+00	1.89500	-4.0850E+00	1.90000	-4.8960E+00	1.90500	-6.2300E+00	1.91000	-7.9320E+00
1.91500	-1.0190E+01	1.92000	-1.2020E+01	1.92500	-1.2950E+01	1.93000	-1.3330E+01	1.93500	-1.4300E+01
1.94000	-1.5970E+01	1.94500	-1.6830E+01	1.95000	-1.6300E+01	1.95500	-1.4920E+01	1.96000	-1.3240E+01
1.96500	-1.1500E+01	1.97000	-9.5170E+00	1.97500	-8.2290E+00	1.98000	-7.4600E+00	1.98500	-6.8420E+00
1.99000	-6.3320E+00	1.99500	-5.7520E+00	2.00000	-5.1330E+00	2.00500	-4.2970E+00	2.01000	-3.4160E+00
2.01500	-2.4010E+00	2.02000	-1.4550E+00	2.02500	-6.7400E-01	2.03000	-1.3600E-01	2.03500	2.9400E-01
2.04000	6.0900E-01	2.04500	8.3400E-01	2.05000	1.0390E+00	2.05500	1.2150E+00	2.06000	1.3660E+00
2.06500	1.4880E+00	2.07000	1.6160E+00	2.07500	1.7410E+00	2.08000	1.9100E+00	2.08500	2.1050E+00
2.09000	2.3780E+00	2.09500	2.6980E+00	2.10000	3.1630E+00	2.10500	3.7200E+00	2.11000	4.4900E+00
2.11500	5.2980E+00	2.12000	6.2030E+00	2.12500	6.9220E+00	2.13000	7.4590E+00	2.13500	7.8530E+00
2.14000	8.1340E+00	2.14500	8.4520E+00	2.15000	8.8860E+00	2.15500	8.8670E+00	2.16000	7.8180E+00
2.16500	7.2770E+00	2.17000	7.7760E+00	2.17500	8.0980E+00	2.18000	8.0350E+00	2.18500	7.7950E+00
2.19000	7.4970E+00	2.19500	7.1700E+00	2.20000	6.5720E+00	2.20500	5.8640E+00	2.21000	5.1950E+00
2.21500	4.7780E+00	2.22000	4.4310E+00	2.22500	4.1540E+00	2.23000	3.8740E+00	2.23500	3.6250E+00
2.24000	3.3330E+00	2.24500	3.0330E+00	2.25000	2.6980E+00	2.25500	2.2970E+00	2.26000	1.8560E+00
2.26500	1.4230E+00	2.27000	9.4200E-01	2.27500	5.3300E-01	2.28000	1.4600E-01	2.28500	-1.4300E-01

2	29000	-4	0000E-01	2	29500	-6	1500E-01	2	30000	-7	7800E-01	2	30500	-9	3200E-01	2	31000	-1	0690E+00
2	31500	-1	2250E+00	2	32000	-1	3910E+00	2	32500	-1	5670E+00	2	33000	-1	8230E+00	2	33500	-2	1830E+00
2	34000	-2	6520E+00	2	34500	-3	3990E+00	2	35000	-4	4820E+00	2	35500	-5	9560E+00	2	36000	-7	4710E+00
2	36500	-8	8870E+00	2	37000	-1	0130E+01	2	37500	-1	1890E+01	2	38000	-1	2700E+01	2	38500	-1	3350E+01
2	39000	-1	3180E+01	2	39500	-1	1400E+01	2	40000	-9	5070E+00	2	40500	-8	1770E+00	2	41000	-7	1210E+00
2	41500	-6	0080E+00	2	42000	-5	1150E+00	2	42500	-4	5350E+00	2	43000	-4	0640E+00	2	43500	-3	6810E+00
2	44000	-3	3630E+00	2	44500	-3	0160E+00	2	45000	-2	1520E+00	2	45500	-2	2670E+00	2	46000	-1	9010E+00
2	46500	-1	4840E+00	2	47000	-1	0600E+00	2	47500	-7	1200E-01	2	48000	-3	6400E-01	2	48500	-7	5000E-02
2	49000	1	5700E-01	2	49500	3	3000E-01	2	50000	4	8800E-01	2	50500	-6	2100E-01	2	51000	7	3100E-01
2	51500	8	4800E-01	2	52000	9	6800E-01	2	52500	1	0880E+00	2	53000	1	2440E+00	2	53500	1	4450E+00
2	54000	1	7160E+00	2	54500	2	0470E+00	2	55000	2	5310E+00	2	55500	3	1600E+00	2	56000	3	8400E+00
2	56500	4	6400E+00	2	57000	5	3990E+00	2	57500	6	0690E+00	2	58000	6	6250E+00	2	58500	7	2070E+00
2	59000	7	7100E+00	2	59500	8	1440E+00	2	60000	8	3780E+00	2	60500	6	4230E+00	2	61000	8	0630E+00
2	61500	6	6170E+00	2	62000	5	2440E+00	2	62500	5	0870E+00	2	63000	5	1830E+00	2	63500	5	0180E+00
2	64000	4	7510E+00	2	64500	4	4870E+00	2	65000	4	0910E+00	2	65500	3	5800E+00	2	66000	3	1260E+00
2	66500	2	8400E+00	2	67000	2	6160E+00	2	67500	2	4220E+00	2	68000	2	2470E+00	2	68500	2	0440E+00
2	69000	1	8280E+00	2	69500	1	5950E+00	2	70000	1	3460E+00	2	70500	1	1110E+00	2	71000	8	5000E-01
2	71500	5	9300E-01	2	72000	3	5000E-01	2	72500	1	3300E-01	2	73000	-4	1000E-02	2	73500	-2	1000E-01
2	74000	-3	5200E-01	2	74500	-4	7900E-01	2	75000	-5	9000E-01	2	75500	-7	0300E-01	2	76000	-8	2600E-01
2	76500	-9	7300E-01	2	77000	-1	1580E+00	2	77500	-1	4100E+00	2	78000	-1	7450E+00	2	78500	-2	2890E+00
2	79000	-3	0950E+00	2	79500	-1	1080E+00	2	80000	-5	2050E+00	2	80500	-6	6140E+00	2	81000	-9	1820E+00
2	81500	-1	2410E+01	2	82000	-1	3390E+01	2	82500	-1	1470E+01	2	83000	-8	8090E+00	2	83500	-6	8560E+00
2	84000	-5	9010E+00	2	84500	-5	4640E+00	2	85000	-5	1150E+00	2	85500	-4	6500E+00	2	86000	-4	1020E+00
2	86500	-3	5320E+00	2	87000	-3	0370E+00	2	87500	-2	6670E+00	2	88000	-2	3930E+00	2	88500	-2	1650E+00
2	89000	-1	9490E+00	2	89500	-1	7310E+00	2	90000	-1	5050E+00	2	90500	-1	2730E+00	2	91000	-1	0370E+00
2	91500	-8	0300E-01	2	92000	-5	7800E-01	2	92500	-3	6900E-01	2	93000	-1	9700E-01	2	93500	-3	0000E-02
2	94000	1	1400E-01	2	94500	2	3900E-01	2	95000	3	4700E-01	2	95500	4	4400E-01	2	96000	5	3800E-01
2	96500	6	3800E-01	2	97000	7	5300E-01	2	97500	8	9300E-01	2	98000	1	0770E+00	2	98500	1	3290E+00
2	99000	1	6810E+00																

TIME FUNCTION NUMBER = (4)
 FUNCTION DESCRIPTION = (TH-4 NODE 130 FORCE VS TIME)
 NUMBER OF ABSCISSAE = (758)
 FUNCTION SCALE FACTOR = (.1000E+04)

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TIME VALUE	FUNCTION	TIME VALUE	FUNCTION	TIME VALUE	FUNCTION	TIME VALUE	FUNCTION	TIME VALUE	FUNCTION
.00000	0.0000E+00	.00020	0.0000E+00	.00040	0.0000E+00	.00060	0.0000E+00	.00080	0.0000E+00
.00100	0.0000E+00	.00131	0.0000E+00	.00162	0.0000E+00	.00194	0.0000E+00	.00225	1.0000E-03
.00256	2.0000E-03	.00288	3.0000E-03	.00319	3.0000E-03	.00350	4.0000E-03	.00381	5.0000E-03
.00411	5.0000E-03	.00442	6.0000E-03	.00473	6.0000E-03	.00504	6.0000E-03	.00535	7.0000E-03
.00566	8.0000E-03	.00596	8.0000E-03	.00627	9.0000E-03	.00658	1.0000E-02	.00689	1.0000E-02
.00719	1.1000E-02	.00750	1.1000E-02	.00781	1.2000E-02	.00812	1.2000E-02	.00843	1.3000E-02
.00873	1.3000E-02	.00904	1.4000E-02	.00935	1.4000E-02	.00966	1.4000E-02	.00996	1.5000E-02
.01027	1.5000E-02	.01058	1.6000E-02	.01088	1.6000E-02	.01119	1.6000E-02	.01150	1.7000E-02
.01180	1.7000E-02	.01211	1.8000E-02	.01241	1.8000E-02	.01272	1.8000E-02	.01302	1.8000E-02
.01333	1.9000E-02	.01364	1.9000E-02	.01394	1.9000E-02	.01425	1.9000E-02	.01455	1.9000E-02
.01485	1.9000E-02	.01516	1.9000E-02	.01546	1.9000E-02	.01576	1.9000E-02	.01607	1.9000E-02
.01637	1.9000E-02	.01667	1.9000E-02	.01698	1.9000E-02	.01728	1.9000E-02	.01758	1.9000E-02
.01789	1.9000E-02	.01819	1.9000E-02	.01849	1.8000E-02	.01879	1.8000E-02	.01910	1.8000E-02
.01940	1.8000E-02	.01970	1.8000E-02	.02000	1.8000E-02	.02031	1.8000E-02	.02061	1.7000E-02
.02091	1.7000E-02	.02121	1.7000E-02	.02151	1.7000E-02	.02181	1.7000E-02	.02212	1.7000E-02
.02242	1.7000E-02	.02272	1.7000E-02	.02302	1.7000E-02	.02332	1.7000E-02	.02362	1.7000E-02
.02393	1.7000E-02	.02423	1.7000E-02	.02453	1.7000E-02	.02483	1.7000E-02	.02513	1.7000E-02
.02543	1.7000E-02	.02573	1.7000E-02	.02603	1.7000E-02	.02633	1.7000E-02	.02663	1.7000E-02
.02694	1.7000E-02	.02724	1.7000E-02	.02754	1.7000E-02	.02784	1.7000E-02	.02814	1.7000E-02
.02844	1.7000E-02	.02874	1.7000E-02	.02904	1.7000E-02	.02934	1.7000E-02	.02964	1.7000E-02
.02994	1.7000E-02	.03024	1.7000E-02	.03054	1.7000E-02	.03084	1.7000E-02	.03114	1.7000E-02
.03144	1.7000E-02	.03174	1.7000E-02	.03204	1.7000E-02	.03234	1.7000E-02	.03264	1.7000E-02
.03294	1.7000E-02	.03324	1.7000E-02	.03354	1.7000E-02	.03384	1.7000E-02	.03414	1.7000E-02
.03444	1.7000E-02	.03474	1.7000E-02	.03504	1.7000E-02	.03534	1.7000E-02	.03564	1.7000E-02
.03594	1.7000E-02	.03624	1.7000E-02	.03654	1.7000E-02	.03684	1.7000E-02	.03714	1.7000E-02
.03744	1.7000E-02	.03774	1.7000E-02	.03804	1.7000E-02	.03833	1.7000E-02	.03863	1.7000E-02
.03893	1.7000E-02	.03923	1.7000E-02	.03953	1.7000E-02	.03983	1.7000E-02	.04013	1.7000E-02
.04043	1.7000E-02	.04073	1.7000E-02	.04103	1.7000E-02	.04133	1.7000E-02	.04163	1.7000E-02
.04193	1.7000E-02	.04223	1.7000E-02	.04253	1.7000E-02	.04282	1.7000E-02	.04312	1.7000E-02
.04342	1.7000E-02	.04372	1.7000E-02	.04402	1.7000E-02	.04432	1.7000E-02	.04462	1.7000E-02
.04492	1.7000E-02	.04522	1.7000E-02	.04552	1.7000E-02	.04582	1.7000E-02	.04612	1.7000E-02
.04641	1.7000E-02	.04671	1.7000E-02	.04701	1.7000E-02	.04731	1.7000E-02	.04761	1.7000E-02
.04791	1.7000E-02	.04821	1.7000E-02	.04851	1.7000E-02	.04881	1.7000E-02	.04911	1.7000E-02
.04941	1.7000E-02	.04970	1.7000E-02	.05000	1.7000E-02	.05479	2.6000E-02	.05986	1.6000E-02
.06492	1.6000E-02	.06999	1.6000E-02	.07477	1.6000E-02	.07984	1.7000E-02	.08492	3.3000E-02
.08999	2.4300E-01	.09475	1.0780E+00	.09982	2.5440E+00	.10490	5.7580E+00	.11000	1.2150E+01
.11480	2.0210E+01	.11980	2.9040E+01	.12490	3.4810E+01	.13000	3.8350E+01	.13470	4.2710E+01
.13980	4.9220E+01	.14490	5.4840E+01	.15000	5.6740E+01	.15470	5.5400E+01	.15980	5.2070E+01
.16490	4.8020E+01	.17000	4.3940E+01	.17480	4.0360E+01	.17980	3.6930E+01	.18490	3.3910E+01
.19000	3.1150E+01	.19480	2.9270E+01	.19980	2.7440E+01	.20490	2.5610E+01	.21000	2.4160E+01
.21470	2.2950E+01	.21980	2.1810E+01	.22480	2.0800E+01	.22980	1.9890E+01	.23480	1.9080E+01
.23980	1.8350E+01	.24480	1.7680E+01	.24980	1.7070E+01	.25480	1.6520E+01	.25970	1.6000E+01
.26500	1.5490E+01	.26990	1.5050E+01	.27490	1.4630E+01	.27990	1.4230E+01	.28480	1.3850E+01
.28980	1.3500E+01	.29470	1.3160E+01	.30000	1.2810E+01	.30490	1.2500E+01	.30990	1.2200E+01
.31480	1.1920E+01	.31980	1.1640E+01	.32470	1.1380E+01	.33000	1.1110E+01	.33500	1.0870E+01
.33990	1.0640E+01	.34490	1.0420E+01	.34980	1.0220E+01	.35480	1.0030E+01	.35970	9.8510E+00
.36500	9.6790E+00	.36990	9.5310E+00	.37490	9.3960E+00	.37980	9.2750E+00	.38470	9.1670E+00
.39000	9.0660E+00	.39490	8.9810E+00	.39980	8.9070E+00	.40500	8.8380E+00	.40990	8.7810E+00
.41470	8.7300E+00	.41990	8.6830E+00	.42500	8.6400E+00	.42980	8.6040E+00	.43490	8.5700E+00
.43970	8.5400E+00	.44480	8.5100E+00	.44980	8.4820E+00	.45490	8.4560E+00	.45990	8.4290E+00
.46470	8.4030E+00	.46980	8.3740E+00	.47480	8.3390E+00	.47980	8.2930E+00	.48490	8.2280E+00
.48990	8.1310E+00	.49500	7.9830E+00	.50000	7.7580E+00	.50500	7.4300E+00	.51000	6.9840E+00
.51470	6.4620E+00	.51970	5.8400E+00	.52500	5.1690E+00	.53000	4.5720E+00	.53500	4.0290E+00
.54000	3.5190E+00	.54500	2.8420E+00	.55000	2.1950E+00	.55500	1.4390E+00	.56000	6.3800E-01
.56500	-7.3000E-02	.57000	-2.1100E-01	.57500	8.6600E-01	.58000	7.1400E-01	.58500	1.4570E+00
.59000	2.2970E+00	.59500	3.3240E+00	.60000	4.2900E+00	.60500	4.9800E+00	.61000	5.4130E+00
.61500	5.6700E+00	.62000	5.8570E+00	.62500	6.1270E+00	.62980	6.4990E+00	.63480	6.8890E+00

.63990	7.1440E+00	.64500	7.2720E+00	.64980	7.3490E+00	.65500	7.4360E+00	.65990	7.5290E+00
.66480	7.6230E+00	.67000	7.7160E+00	.67500	7.7950E+00	.67990	7.8650E+00	.68480	7.9270E+00
.68980	7.9810E+00	.69480	8.0290E+00	.69970	8.0710E+00	.70500	8.1090E+00	.70990	8.1400E+00
.71490	8.1660E+00	.71990	8.1890E+00	.72480	8.2080E+00	.72980	8.2230E+00	.73470	8.2360E+00
.74000	8.2470E+00	.74490	8.2550E+00	.74990	8.2620E+00	.75480	8.2670E+00	.75980	8.2730E+00
.76500	8.2780E+00	.76990	8.2840E+00	.77490	8.2900E+00	.77980	8.2960E+00	.78480	8.3010E+00
.78970	8.3050E+00	.79500	8.3070E+00	.79990	8.3060E+00	.80490	8.3040E+00	.80980	8.3020E+00
.81480	8.2990E+00	.81980	8.2980E+00	.82500	8.3010E+00	.83000	8.3080E+00	.83490	8.3230E+00
.83990	8.3450E+00	.84480	8.3750E+00	.84980	8.4120E+00	.85470	8.4570E+00	.86000	8.5110E+00
.86490	8.5660E+00	.86990	8.6240E+00	.87480	8.6820E+00	.87980	8.7370E+00	.88470	8.7870E+00
.89000	8.8300E+00	.89490	8.8570E+00	.89990	8.8690E+00	.90490	8.8630E+00	.90980	8.8390E+00
.91480	8.7970E+00	.92000	8.7350E+00	.92500	8.6620E+00	.92990	8.5780E+00	.93490	8.4850E+00
.93980	8.3890E+00	.94480	8.2950E+00	.94970	8.2070E+00	.95500	8.1260E+00	.95990	8.0630E+00
.96490	8.0160E+00	.96980	7.9840E+00	.97480	7.9640E+00	.97970	7.9530E+00	.98500	7.9470E+00
.98990	7.9440E+00	.99490	7.9400E+00	.99980	7.9340E+00	1.00500	7.9260E+00	1.01000	7.9150E+00
1.01500	7.9020E+00	1.02000	7.8890E+00	1.02500	7.8760E+00	1.03000	7.8620E+00	1.03500	7.8490E+00
1.04000	7.8350E+00	1.04500	7.8230E+00	1.05000	7.8120E+00	1.05500	7.8030E+00	1.06000	7.7940E+00
1.06500	7.7860E+00	1.07000	7.7800E+00	1.07500	7.7750E+00	1.08000	7.7710E+00	1.08500	7.7680E+00
1.09000	7.7660E+00	1.09500	7.7650E+00	1.10000	7.7650E+00	1.10500	7.7650E+00	1.11000	7.7660E+00
1.11500	7.7670E+00	1.12000	7.7690E+00	1.12500	7.7700E+00	1.13000	7.7720E+00	1.13500	7.7740E+00
1.14000	7.7760E+00	1.14500	7.7770E+00	1.15000	7.7790E+00	1.15500	7.7810E+00	1.16000	7.7820E+00
1.16500	7.7840E+00	1.17000	7.7850E+00	1.17500	7.7850E+00	1.18000	7.7850E+00	1.18500	7.7840E+00
1.19000	7.7820E+00	1.19500	7.7780E+00	1.20000	7.7720E+00	1.20500	7.7630E+00	1.21000	7.7480E+00
1.21500	7.7240E+00	1.22000	7.6890E+00	1.22500	7.6360E+00	1.23000	7.5610E+00	1.23500	7.4610E+00
1.24000	7.3350E+00	1.24500	7.1820E+00	1.25000	7.0030E+00	1.25500	6.7980E+00	1.26000	6.5550E+00
1.26500	6.2960E+00	1.27000	6.0080E+00	1.27500	5.6930E+00	1.28000	5.3540E+00	1.28500	4.9970E+00
1.29000	4.6160E+00	1.29500	4.2580E+00	1.30000	3.9150E+00	1.30500	3.5730E+00	1.31000	3.2660E+00
1.31500	2.9680E+00	1.32000	2.6550E+00	1.32500	2.3490E+00	1.33000	2.0290E+00	1.33500	1.6710E+00
1.34000	1.3580E+00	1.34500	8.1500E-01	1.35000	4.8000E-02	1.35500	-8.7000E-01	1.36000	-1.7780E+00
1.36500	-2.9170E+00	1.37000	-4.0950E+00	1.37500	-5.1850E+00	1.38000	-6.0850E+00	1.38500	-7.6110E+00
1.39000	-1.0290E+01	1.39500	-1.2680E+01	1.40000	-1.3740E+01	1.40500	-1.4310E+01	1.41000	-1.5440E+01
1.41500	-1.6730E+01	1.42000	-1.7800E+01	1.42500	-1.8770E+01	1.43000	-1.9450E+01	1.43500	-2.1090E+01
1.44000	-2.3420E+01	1.44500	-2.6680E+01	1.45000	-3.0900E+01	1.45500	-3.5250E+01	1.46000	-3.9640E+01
1.46500	-4.3720E+01	1.47000	-4.7950E+01	1.47500	-5.2770E+01	1.48000	-5.7650E+01	1.48500	-6.1490E+01
1.49000	-6.3830E+01	1.49500	-6.5390E+01	1.50000	-6.6650E+01	1.50500	-6.7150E+01	1.51000	-6.6630E+01
1.51500	-6.5390E+01	1.52000	-6.3760E+01	1.52500	-6.2360E+01	1.53000	-5.9730E+01	1.53500	-4.8640E+01
1.54000	-2.9490E+01	1.54500	-1.7800E+01	1.55000	-1.3940E+01	1.55500	-1.0840E+01	1.56000	-6.1200E+00
1.56500	-1.2860E+00	1.57000	2.7320E+00	1.57500	5.2820E+00	1.58000	6.9000E+00	1.58500	7.9180E+00
1.59000	8.6740E+00	1.59500	9.1440E+00	1.60000	9.4540E+00	1.60500	9.7260E+00	1.61000	1.0140E+01
1.61500	1.0600E+01	1.62000	1.1110E+01	1.62500	1.1640E+01	1.63000	1.2290E+01	1.63500	1.3120E+01
1.64000	1.4170E+01	1.64500	1.5540E+01	1.65000	1.7230E+01	1.65500	1.9130E+01	1.66000	2.1070E+01
1.66500	2.2880E+01	1.67000	2.4390E+01	1.67500	2.5250E+01	1.68000	2.5110E+01	1.68500	2.5360E+01
1.69000	2.6830E+01	1.69500	2.8140E+01	1.70000	2.8420E+01	1.70500	2.8400E+01	1.71000	2.8330E+01
1.71500	2.8760E+01	1.72000	2.9130E+01	1.72500	2.9590E+01	1.73000	2.9870E+01	1.73500	2.9560E+01
1.74000	2.8700E+01	1.74500	2.7680E+01	1.75000	2.6820E+01	1.75500	2.6000E+01	1.76000	2.4990E+01
1.76500	2.3830E+01	1.77000	2.2820E+01	1.77500	2.1880E+01	1.78000	2.0990E+01	1.78500	1.9840E+01
1.79000	1.8550E+01	1.79500	1.6840E+01	1.80000	1.4900E+01	1.80500	1.2790E+01	1.81000	1.0810E+01
1.81500	8.6080E+00	1.82000	6.3750E+00	1.82500	4.1230E+00	1.83000	1.9120E+00	1.83500	-1.2300E-01
1.84000	-1.8210E+00	1.84500	-3.1240E+00	1.85000	-4.1150E+00	1.85500	-4.9170E+00	1.86000	-5.6300E+00
1.86500	-6.3370E+00	1.87000	-7.0890E+00	1.87500	-7.9320E+00	1.88000	-8.9580E+00	1.88500	-1.0200E+01
1.89000	-1.2130E+01	1.89500	-1.4820E+01	1.90000	-1.7860E+01	1.90500	-2.1340E+01	1.91000	-2.4090E+01
1.91500	-2.6940E+01	1.92000	-3.0270E+01	1.92500	-3.4570E+01	1.93000	-3.9070E+01	1.93500	-4.1180E+01
1.94000	-4.1440E+01	1.94500	-4.1290E+01	1.95000	-4.1220E+01	1.95500	-4.0060E+01	1.96000	-3.6990E+01
1.96500	-3.3480E+01	1.97000	-2.9850E+01	1.97500	-2.6760E+01	1.98000	-2.3760E+01	1.98500	-2.0730E+01
1.99000	-1.8270E+01	1.99500	-1.5760E+01	2.00000	-1.3490E+01	2.00500	-1.0960E+01	2.01000	-8.7300E+00
2.01500	-6.4780E+00	2.02000	-4.4780E+00	2.02500	-2.7130E+00	2.03000	-1.2880E+00	2.03500	8.1000E-02
2.04000	1.2250E+00	2.04500	2.0660E+00	2.05000	2.8010E+00	2.05500	3.3880E+00	2.06000	3.8870E+00
2.06500	4.3190E+00	2.07000	4.8170E+00	2.07500	5.3250E+00	2.08000	5.9750E+00	2.08500	6.6940E+00
2.09000	7.7020E+00	2.09500	8.8870E+00	2.10000	1.0510E+01	2.10500	1.2210E+01	2.11000	1.4160E+01
2.11500	1.5840E+01	2.12000	1.7460E+01	2.12500	1.8800E+01	2.13000	2.0160E+01	2.13500	2.1740E+01
2.14000	2.3070E+01	2.14500	2.2860E+01	2.15000	2.2250E+01	2.15500	2.2330E+01	2.16000	2.3580E+01
2.16500	2.4200E+01	2.17000	2.3410E+01	2.17500	2.2330E+01	2.18000	2.1940E+01	2.18500	2.1800E+01
2.19000	2.0920E+01	2.19500	1.5710E+01	2.20000	1.8430E+01	2.20500	1.7380E+01	2.21000	1.6070E+01
2.21500	1.4700E+01	2.22000	1.3260E+01	2.22500	1.2170E+01	2.23000	1.1150E+01	2.23500	1.0250E+01
2.24000	9.2420E+00	2.24500	8.2920E+00	2.25000	7.2880E+00	2.25500	6.1140E+00	2.26000	4.9140E+00
2.26500	3.8400E+00	2.27000	2.7060E+00	2.27500	1.7040E+00	2.28000	6.6500E-01	2.28500	-1.9300E-01

2.29000	-1.0150E+00	2.29500	-1.7100E+00	2.30000	-2.2610E+00	2.30500	-2.8120E+00	2.31000	-3.2940E+00
2.31500	-3.8520E+00	2.32000	-4.5240E+00	2.32500	-5.3070E+00	2.33000	-6.4580E+00	2.33500	-8.0480E+00
2.34000	-9.9880E+00	2.34500	-1.2580E+01	2.35000	-1.5270E+01	2.35500	-1.8150E+01	2.36000	-2.1170E+01
2.36500	-2.4840E+01	2.37000	-2.8430E+01	2.37500	-3.0680E+01	2.38000	-3.1610E+01	2.38500	-3.1490E+01
2.39000	-3.1050E+01	2.39500	-3.0450E+01	2.40000	-2.8610E+01	2.40500	-2.5320E+01	2.41000	-2.1920E+01
2.41500	-1.8720E+01	2.42000	-1.6260E+01	2.42500	-1.4370E+01	2.43000	-1.2530E+01	2.43500	-1.0970E+01
2.44000	-9.7450E+00	2.44500	-8.5350E+00	2.45000	-7.3810E+00	2.45500	-6.2380E+00	2.46000	-5.2020E+00
2.46500	-4.0920E+00	2.47000	-3.0440E+00	2.47500	-2.1670E+00	2.48000	-1.2880E+00	2.48500	-4.9900E-01
2.49000	1.9600E-01	2.49500	7.4600E-01	2.50000	1.2710E+00	2.50500	1.7320E+00	2.51000	2.1170E+00
2.51500	2.5280E+00	2.52000	2.9620E+00	2.52500	3.4170E+00	2.53000	4.0330E+00	2.53500	4.8280E+00
2.54000	5.8620E+00	2.54500	7.0410E+00	2.55000	8.5760E+00	2.55500	1.0250E+01	2.56000	1.1800E+01
2.56500	1.3500E+01	2.57000	1.5260E+01	2.57500	1.7050E+01	2.58000	1.8600E+01	2.58500	2.0060E+01
2.59000	2.1150E+01	2.59500	2.1740E+01	2.60000	2.1220E+01	2.60500	2.0100E+01	2.61000	1.9550E+01
2.61500	1.9700E+01	2.62000	1.9310E+01	2.62500	1.7360E+01	2.63000	1.5300E+01	2.63500	1.3800E+01
2.64000	1.3080E+01	2.64500	1.2350E+01	2.65000	1.1440E+01	2.65500	1.0600E+01	2.66000	9.7210E+00
2.66500	8.8190E+00	2.67000	7.8360E+00	2.67500	7.0080E+00	2.68000	6.3720E+00	2.68500	5.7200E+00
2.69000	5.0620E+00	2.69500	4.3850E+00	2.70000	3.6930E+00	2.70500	3.0580E+00	2.71000	2.5670E+00
2.71500	1.6970E+00	2.72000	1.0590E+00	2.72500	4.6100E-01	2.73000	-3.8000E-02	2.73500	-5.3500E-01
2.74000	-9.8400E-01	2.74500	-1.4040E+00	2.75000	-1.8160E+00	2.75500	-2.2370E+00	2.76000	-2.7190E+00
2.76500	-3.3340E+00	2.77000	-4.1810E+00	2.77500	-5.3710E+00	2.78000	-6.7600E+00	2.78500	-8.5270E+00
2.79000	-1.0760E+01	2.79500	-1.4270E+01	2.80000	-1.9190E+01	2.80500	-2.3310E+01	2.81000	-2.4710E+01
2.81500	-2.3930E+01	2.82000	-2.4010E+01	2.82500	-2.5760E+01	2.83000	-2.6670E+01	2.83500	-2.4930E+01
2.84000	-2.1230E+01	2.84500	-1.7530E+01	2.85000	-1.4980E+01	2.85500	-1.3060E+01	2.86000	-1.1670E+01
2.86500	-1.0510E+01	2.87000	-9.4130E+00	2.87500	-8.3370E+00	2.88000	-7.3180E+00	2.88500	-6.4080E+00
2.89000	-5.6130E+00	2.89500	-4.8990E+00	2.90000	-4.2230E+00	2.90500	-3.5640E+00	2.91000	-2.9180E+00
2.91500	-2.2920E+00	2.92000	-1.6970E+00	2.92500	-1.1410E+00	2.93000	-6.7200E-01	2.93500	-2.0200E-01
2.94000	2.2200E-01	2.94500	6.0300E-01	2.95000	9.5500E-01	2.95500	1.2930E+00	2.96000	1.6350E+00
2.96500	2.0070E+00	2.97000	2.4490E+00	2.97500	3.0140E+00	2.98000	3.7580E+00	2.98500	4.7160E+00
2.99000	5.8770E+00	2.99500	7.2280E+00	3.00000	8.8440E+00				

TIME FUNCTION NUMBER = (5)
 FUNCTION DESCRIPTION = (TH-5 NODE 6040 FORCE VS TIME)
 NUMBER OF ABSCISSAE = (758)
 FUNCTION SCALE FACTOR = (.1000E+04)

TIME VALUE	FUNCTION	TIME VALUE	FUNCTION	TIME VALUE	FUNCTION	TIME VALUE	FUNCTION	TIME VALUE	FUNCTION
.00000	0.0000E+00	.00020	0.0000E+00	.00040	0.0000E+00	.00060	0.0000E+00	.00080	0.0000E+00
.00100	0.0000E+00	.00131	0.0000E+00	.00162	0.0000E+00	.00194	0.0000E+00	.00225	0.0000E+00
.00256	0.0000E+00	.00288	0.0000E+00	.00319	0.0000E+00	.00350	0.0000E+00	.00381	0.0000E+00
.00411	0.0000E+00	.00442	0.0000E+00	.00473	0.0000E+00	.00504	0.0000E+00	.00535	0.0000E+00
.00566	0.0000E+00	.00596	0.0000E+00	.00627	0.0000E+00	.00658	0.0000E+00	.00689	0.0000E+00
.00719	0.0000E+00	.00750	0.0000E+00	.00781	0.0000E+00	.00812	0.0000E+00	.00843	0.0000E+00
.00873	0.0000E+00	.00904	0.0000E+00	.00935	0.0000E+00	.00966	0.0000E+00	.00996	0.0000E+00
.01027	0.0000E+00	.01058	0.0000E+00	.01088	0.0000E+00	.01119	0.0000E+00	.01150	0.0000E+00
.01180	0.0000E+00	.01211	0.0000E+00	.01241	0.0000E+00	.01272	0.0000E+00	.01302	0.0000E+00
.01333	1.0000E-03	.01364	1.0000E-03	.01394	1.0000E-03	.01425	1.0000E-03	.01455	1.0000E-03
.01485	2.0000E-03	.01516	2.0000E-03	.01546	3.0000E-03	.01576	3.0000E-03	.01607	3.0000E-03
.01637	4.0000E-03	.01667	4.0000E-03	.01698	5.0000E-03	.01728	5.0000E-03	.01758	6.0000E-03
.01789	6.0000E-03	.01819	7.0000E-03	.01849	7.0000E-03	.01879	8.0000E-03	.01910	9.0000E-03
.01940	9.0000E-03	.01970	1.0000E-02	.02000	1.0000E-02	.02031	1.1000E-02	.02061	1.1000E-02
.02091	1.2000E-02	.02121	1.2000E-02	.02151	1.2000E-02	.02181	1.3000E-02	.02212	1.3000E-02
.02242	1.4000E-02	.02272	1.4000E-02	.02302	1.5000E-02	.02332	1.5000E-02	.02362	1.6000E-02
.02393	1.6000E-02	.02423	1.6000E-02	.02453	1.7000E-02	.02483	1.7000E-02	.02513	1.8000E-02
.02543	1.8000E-02	.02573	1.8000E-02	.02603	1.9000E-02	.02633	1.9000E-02	.02663	1.9000E-02
.02694	2.0000E-02	.02724	2.0000E-02	.02754	2.1000E-02	.02784	2.1000E-02	.02814	2.1000E-02
.02844	2.2000E-02	.02874	2.2000E-02	.02904	2.3000E-02	.02934	2.3000E-02	.02964	2.3000E-02
.02994	2.4000E-02	.03024	2.4000E-02	.03054	2.4000E-02	.03084	2.5000E-02	.03114	2.5000E-02
.03144	2.6000E-02	.03174	2.6000E-02	.03204	2.6000E-02	.03234	2.7000E-02	.03264	2.7000E-02
.03294	2.8000E-02	.03324	2.8000E-02	.03354	2.8000E-02	.03384	2.9000E-02	.03414	2.9000E-02
.03444	2.9000E-02	.03474	3.0000E-02	.03504	3.0000E-02	.03534	3.1000E-02	.03564	3.1000E-02
.03594	3.1000E-02	.03624	3.2000E-02	.03654	3.2000E-02	.03684	3.2000E-02	.03714	3.3000E-02
.03744	3.3000E-02	.03774	3.4000E-02	.03804	3.4000E-02	.03833	3.4000E-02	.03863	3.5000E-02
.03893	3.5000E-02	.03923	3.5000E-02	.03953	3.6000E-02	.03983	3.6000E-02	.04013	3.6000E-02
.04043	3.7000E-02	.04073	3.7000E-02	.04103	3.7000E-02	.04133	3.8000E-02	.04163	3.8000E-02
.04193	3.8000E-02	.04223	3.9000E-02	.04253	3.9000E-02	.04282	3.9000E-02	.04312	3.9000E-02
.04342	4.0000E-02	.04372	4.0000E-02	.04402	4.0000E-02	.04432	4.0000E-02	.04462	4.0000E-02
.04492	4.1000E-02	.04522	4.1000E-02	.04552	4.1000E-02	.04582	4.1000E-02	.04612	4.1000E-02
.04641	4.1000E-02	.04671	4.1000E-02	.04701	4.1000E-02	.04731	4.1000E-02	.04761	4.1000E-02
.04791	4.1000E-02	.04821	4.1000E-02	.04851	4.1000E-02	.04881	4.1000E-02	.04911	4.2000E-02
.04941	4.2000E-02	.04970	4.2000E-02	.05000	4.3000E-02	.05479	1.6100E-01	.05986	1.3240E+00
.06492	4.4280E+00	.06999	1.3610E+01	.07477	2.6630E+01	.07984	4.1180E+01	.08492	5.4190E+01
.08999	5.4870E+01	.09475	7.2460E+01	.09982	7.8320E+01	.10490	8.0900E+01	.11000	7.8720E+01
.11480	7.3670E+01	.11980	6.7000E+01	.12490	6.0350E+01	.13000	5.4670E+01	.13470	5.0690E+01
.13980	4.8100E+01	.14490	4.9370E+01	.15000	5.6040E+01	.15470	6.5800E+01	.15980	7.7490E+01
.16490	8.8630E+01	.17000	9.6240E+01	.17480	9.7810E+01	.17980	9.4430E+01	.18490	8.8460E+01
.19000	8.1880E+01	.19480	7.5950E+01	.19980	7.0180E+01	.20490	6.5330E+01	.21000	6.0950E+01
.21470	5.7320E+01	.21980	5.3990E+01	.22480	5.0910E+01	.22980	4.8170E+01	.23480	4.5800E+01
.23980	4.3710E+01	.24480	4.1890E+01	.24980	4.0320E+01	.25480	3.8970E+01	.25970	3.7700E+01
.26500	3.6650E+01	.26990	3.5670E+01	.27490	3.4770E+01	.27990	3.3930E+01	.28480	3.3140E+01
.28980	3.2390E+01	.29470	3.1690E+01	.30000	3.0990E+01	.30490	3.0350E+01	.30990	2.9750E+01
.31480	2.9180E+01	.31980	2.8620E+01	.32470	2.8090E+01	.33000	2.7540E+01	.33500	2.7050E+01
.33990	2.6570E+01	.34490	2.6100E+01	.34980	2.5660E+01	.35480	2.5230E+01	.35970	2.4810E+01
.36500	2.4400E+01	.36990	2.4030E+01	.37490	2.3680E+01	.37980	2.3350E+01	.38470	2.3040E+01
.39000	2.2720E+01	.39490	2.2430E+01	.39980	2.2130E+01	.40500	2.1790E+01	.40990	2.1420E+01
.41470	2.0970E+01	.41990	2.0410E+01	.42500	1.9750E+01	.42980	1.9090E+01	.43490	1.8390E+01
.43970	1.7770E+01	.44480	1.7190E+01	.44980	1.6670E+01	.45490	1.6210E+01	.45990	1.5800E+01
.46470	1.5440E+01	.46980	1.5090E+01	.47480	1.4770E+01	.47980	1.4490E+01	.48490	1.4240E+01
.48990	1.4050E+01	.49500	1.3940E+01	.50000	1.3920E+01	.50500	1.4020E+01	.51000	1.4260E+01
.51470	1.4590E+01	.51970	1.5030E+01	.52500	1.5500E+01	.53000	1.5900E+01	.53500	1.6190E+01
.54000	1.6330E+01	.54500	1.6430E+01	.55000	1.6150E+01	.55500	1.5500E+01	.56000	1.4160E+01
.56500	1.2340E+01	.57000	1.0210E+01	.57500	7.3700E+00	.58000	6.4610E+00	.58500	5.3750E+00
.59000	5.1930E+00	.59500	5.8670E+00	.60000	7.0980E+00	.60500	8.3810E+00	.61000	1.0120E+01
.61500	1.1780E+01	.62000	1.3270E+01	.62500	1.4400E+01	.62980	1.5140E+01	.63480	1.5760E+01

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.63990	1.6380E+01	.64500	1.7030E+01	.64980	1.7640E+01	.65500	1.8190E+01	.65990	1.8570E+01
.66480	1.8800E+01	.67000	1.8960E+01	.67500	1.9090E+01	.67990	1.9220E+01	.68480	1.9350E+01
.68980	1.9480E+01	.69480	1.9590E+01	.69970	1.9690E+01	.70500	1.9790E+01	.70990	1.9870E+01
.71490	1.9940E+01	.71990	2.0010E+01	.72480	2.0070E+01	.72980	2.0120E+01	.73470	2.0170E+01
.74000	2.0210E+01	.74490	2.0240E+01	.74990	2.0270E+01	.75480	2.0300E+01	.75980	2.0330E+01
.76500	2.0370E+01	.76990	2.0410E+01	.77490	2.0470E+01	.77980	2.0530E+01	.78480	2.0600E+01
.78970	2.0680E+01	.79500	2.0760E+01	.79990	2.0840E+01	.80490	2.0900E+01	.80980	2.0950E+01
.81480	2.0980E+01	.81980	2.0990E+01	.82500	2.0970E+01	.83000	2.0940E+01	.83490	2.0890E+01
.83990	2.0830E+01	.84480	2.0760E+01	.84980	2.0690E+01	.85470	2.0620E+01	.86000	2.0550E+01
.86490	2.0490E+01	.86990	2.0430E+01	.87480	2.0390E+01	.87980	2.0370E+01	.88470	2.0370E+01
.89000	2.0410E+01	.89490	2.0460E+01	.89990	2.0540E+01	.90490	2.0640E+01	.90980	2.0740E+01
.91480	2.0840E+01	.92000	2.0930E+01	.92500	2.0980E+01	.92990	2.1000E+01	.93490	2.0970E+01
.93980	2.0900E+01	.94480	2.0780E+01	.94970	2.0630E+01	.95500	2.0430E+01	.95990	2.0240E+01
.96490	2.0040E+01	.96980	1.9850E+01	.97480	1.9690E+01	.97970	1.9560E+01	.98500	1.9460E+01
.98990	1.9400E+01	.99490	1.9360E+01	.99980	1.9340E+01	1.00500	1.9340E+01	1.01000	1.9340E+01
1.01500	1.9340E+01	1.02000	1.9340E+01	1.02500	1.9330E+01	1.03000	1.9320E+01	1.03500	1.9310E+01
1.04000	1.9290E+01	1.04500	1.9270E+01	1.05000	1.9250E+01	1.05500	1.9230E+01	1.06000	1.9220E+01
1.06500	1.9200E+01	1.07000	1.9180E+01	1.07500	1.9160E+01	1.08000	1.9150E+01	1.08500	1.9140E+01
1.09000	1.9120E+01	1.09500	1.9120E+01	1.10000	1.9110E+01	1.10500	1.9100E+01	1.11000	1.9100E+01
1.11500	1.9090E+01	1.12000	1.9090E+01	1.12500	1.9080E+01	1.13000	1.9070E+01	1.13500	1.9060E+01
1.13000	1.9030E+01	1.14500	1.8990E+01	1.15000	1.8930E+01	1.15500	1.8830E+01	1.16000	1.8710E+01
1.16500	1.8560E+01	1.17000	1.8370E+01	1.17500	1.8160E+01	1.18000	1.7930E+01	1.18500	1.7700E+01
1.19000	1.7450E+01	1.19500	1.7180E+01	1.20000	1.6890E+01	1.20500	1.6600E+01	1.21000	1.6280E+01
1.21500	1.5960E+01	1.22000	1.5650E+01	1.22500	1.5320E+01	1.23000	1.4980E+01	1.23500	1.4650E+01
1.24000	1.4330E+01	1.24500	1.4000E+01	1.25000	1.3670E+01	1.25500	1.3320E+01	1.26000	1.2930E+01
1.26500	1.2520E+01	1.27000	1.2060E+01	1.27500	1.1520E+01	1.28000	1.0900E+01	1.28500	1.0170E+01
1.29000	9.2970E+00	1.29500	8.3640E+00	1.30000	7.3570E+00	1.30500	5.9080E+00	1.31000	4.3000E+00
1.31500	2.5940E+00	1.32000	6.9900E-01	1.32500	-1.1820E+00	1.33000	-3.0820E+00	1.33500	-5.0110E+00
1.34000	-6.7970E+00	1.34500	-8.4180E+00	1.35000	-9.7460E+00	1.35500	-1.1120E+01	1.36000	-1.2520E+01
1.36500	-1.3980E+01	1.37000	-1.5380E+01	1.37500	-1.6860E+01	1.38000	-1.8380E+01	1.38500	-1.9920E+01
1.39000	-2.1970E+01	1.39500	-2.5110E+01	1.40000	-3.0270E+01	1.40500	-3.6770E+01	1.41000	-4.3240E+01
1.41500	-5.0320E+01	1.42000	-5.7050E+01	1.42500	-6.3560E+01	1.43000	-6.9270E+01	1.43500	-7.4650E+01
1.44000	-7.9260E+01	1.44500	-8.3090E+01	1.45000	-8.6050E+01	1.45500	-8.8450E+01	1.46000	-9.1120E+01
1.46500	-9.4150E+01	1.47000	-9.7600E+01	1.47500	-1.0160E+02	1.48000	-1.0680E+02	1.48500	-1.1320E+02
1.49000	-1.2010E+02	1.49500	-1.2730E+02	1.50000	-1.3420E+02	1.50500	-1.3440E+02	1.51000	-1.2550E+02
1.51500	-1.1360E+02	1.52000	-9.8190E+01	1.52500	-8.1930E+01	1.53000	-6.3060E+01	1.53500	-5.1450E+01
1.54000	-4.5850E+01	1.54500	-4.1430E+01	1.55000	-3.6600E+01	1.55500	-3.2040E+01	1.56000	-2.7990E+01
1.56500	-2.4410E+01	1.57000	-2.0980E+01	1.57500	-1.7310E+01	1.58000	-1.2480E+01	1.58500	-7.3580E+00
1.59000	-2.2750E+00	1.59500	2.4450E+00	1.60000	7.7870E+00	1.60500	1.2850E+01	1.61000	1.8460E+01
1.61500	2.3490E+01	1.62000	2.8570E+01	1.62500	3.2860E+01	1.63000	3.7020E+01	1.63500	4.1110E+01
1.64000	4.4910E+01	1.64500	4.8220E+01	1.65000	4.9000E+01	1.65500	5.0040E+01	1.66000	5.0510E+01
1.66500	5.0570E+01	1.67000	5.0400E+01	1.67500	5.0780E+01	1.68000	5.1990E+01	1.68500	5.2900E+01
1.69000	5.3960E+01	1.69500	5.5180E+01	1.70000	5.6210E+01	1.70500	5.7350E+01	1.71000	5.8520E+01
1.71500	5.9140E+01	1.72000	5.9680E+01	1.72500	6.0070E+01	1.73000	6.0280E+01	1.73500	6.0490E+01
1.74000	6.0470E+01	1.74500	6.0140E+01	1.75000	5.9630E+01	1.75500	5.8290E+01	1.76000	5.6300E+01
1.76500	5.3030E+01	1.77000	4.9290E+01	1.77500	4.4640E+01	1.78000	4.0490E+01	1.78500	3.6290E+01
1.79000	3.2880E+01	1.79500	2.9600E+01	1.80000	2.6910E+01	1.80500	2.3370E+01	1.81000	2.1060E+01
1.81500	1.9130E+01	1.82000	1.7140E+01	1.82500	1.4900E+01	1.83000	1.2230E+01	1.83500	8.9710E+00
1.84000	4.9930E+00	1.84500	2.9000E-01	1.85000	-5.0490E+00	1.85500	-1.0800E+01	1.86000	-1.7020E+01
1.86500	-2.3150E+01	1.87000	-2.8730E+01	1.87500	-3.3580E+01	1.88000	-3.8320E+01	1.88500	-4.2750E+01
1.89000	-4.7350E+01	1.89500	-5.1160E+01	1.90000	-5.3670E+01	1.90500	-5.5720E+01	1.91000	-5.7380E+01
1.91500	-5.8750E+01	1.92000	-5.8900E+01	1.92500	-5.8250E+01	1.93000	-5.7660E+01	1.93500	-5.7850E+01
1.94000	-5.8810E+01	1.94500	-5.9910E+01	1.95000	-6.1070E+01	1.95500	-6.2410E+01	1.96000	-6.3990E+01
1.96500	-6.4730E+01	1.97000	-6.3900E+01	1.97500	-6.1480E+01	1.98000	-5.7880E+01	1.98500	-5.2940E+01
1.99000	-4.7580E+01	1.99500	-4.0930E+01	2.00000	-3.4770E+01	2.00500	-2.8540E+01	2.01000	-2.3660E+01
2.01500	-1.9110E+01	2.02000	-1.5290E+01	2.02500	-1.2060E+01	2.03000	-9.5470E+00	2.03500	-7.0660E+00
2.04000	-4.6450E+00	2.04500	-2.3590E+00	2.05000	3.1600E-01	2.05500	3.2040E+00	2.06000	6.3580E+00
2.06500	9.5070E+00	2.07000	1.3310E+01	2.07500	1.7060E+01	2.08000	2.1350E+01	2.08500	2.5160E+01
2.09000	2.8960E+01	2.09500	3.1890E+01	2.10000	3.4520E+01	2.10500	3.6480E+01	2.11000	3.8240E+01
2.11500	3.7780E+01	2.12000	3.8030E+01	2.12500	3.8240E+01	2.13000	3.8360E+01	2.13500	3.8350E+01
2.14000	3.8440E+01	2.14500	4.0060E+01	2.15000	4.1480E+01	2.15500	4.2340E+01	2.16000	4.2860E+01
2.16500	4.3410E+01	2.17000	4.3950E+01	2.17500	4.4460E+01	2.18000	4.4180E+01	2.18500	4.3340E+01
2.19000	4.2650E+01	2.19500	4.2060E+01	2.20000	4.1060E+01	2.20500	3.9570E+01	2.21000	3.7520E+01
2.21500	3.5990E+01	2.22000	3.3910E+01	2.22500	3.0640E+01	2.23000	2.7220E+01	2.23500	2.4120E+01
2.24000	2.0830E+01	2.24500	1.8620E+01	2.25000	1.5550E+01	2.25500	1.3340E+01	2.26000	1.1490E+01
2.26500	9.9430E+00	2.27000	8.2430E+00	2.27500	6.6300E+00	2.28000	4.6720E+00	2.28500	2.6370E+00

2.29000	3.5000E-02	2.29500	-3.0270E+00	2.30000	-6.2790E+00	2.30500	-1.0420E+01	2.31000	-1.4480E+01
2.31500	-1.8870E+01	2.32000	-2.3520E+01	2.32500	-2.7960E+01	2.33000	-3.2500E+01	2.33500	-3.6690E+01
2.34000	-3.9870E+01	2.34500	-4.1790E+01	2.35000	-4.2660E+01	2.35500	-4.2680E+01	2.36000	-4.1840E+01
2.36500	-4.0380E+01	2.37000	-3.8600E+01	2.37500	-3.7350E+01	2.38000	-3.7300E+01	2.38500	-3.8220E+01
2.39000	-3.9490E+01	2.39500	-4.1480E+01	2.40000	-4.3900E+01	2.40500	-4.6180E+01	2.41000	-4.7640E+01
2.41500	-4.7820E+01	2.42000	-4.6400E+01	2.42500	-4.3980E+01	2.43000	-4.0250E+01	2.43500	-3.5640E+01
2.44000	-3.0970E+01	2.44500	-2.5740E+01	2.45000	-2.1020E+01	2.45500	-1.7100E+01	2.46000	-1.4150E+01
2.46500	-1.1420E+01	2.47000	-9.1360E+00	2.47500	-7.3780E+00	2.48000	-5.6760E+00	2.48500	-4.0900E+00
2.49000	-2.5040E+00	2.49500	-9.8500E-01	2.50000	8.4300E-01	2.50500	2.9080E+00	2.51000	5.0620E+00
2.51500	7.7980E+00	2.52000	1.0920E+01	2.52500	1.4010E+01	2.53000	1.7500E+01	2.53500	2.0950E+01
2.54000	2.4230E+01	2.54500	2.6960E+01	2.55000	2.9550E+01	2.55500	3.1630E+01	2.56000	3.3020E+01
2.56500	3.3850E+01	2.57000	3.2670E+01	2.57500	3.1740E+01	2.58000	3.0830E+01	2.58500	2.9880E+01
2.59000	2.9230E+01	2.59500	2.9080E+01	2.60000	3.0070E+01	2.60500	3.1640E+01	2.61000	3.2860E+01
2.61500	3.4170E+01	2.62000	3.5480E+01	2.62500	3.6590E+01	2.63000	3.7200E+01	2.63500	3.6850E+01
2.64000	3.5170E+01	2.64500	3.3070E+01	2.65000	3.0280E+01	2.65500	2.7390E+01	2.66000	2.4320E+01
2.66500	2.1910E+01	2.67000	2.0080E+01	2.67500	1.8320E+01	2.68000	1.6440E+01	2.68500	1.4330E+01
2.69000	1.2320E+01	2.69500	1.0450E+01	2.70000	8.7840E+00	2.70500	7.4840E+00	2.71000	6.2320E+00
2.71500	5.0350E+00	2.72000	3.7950E+00	2.72500	2.4190E+00	2.73000	9.8000E-01	2.73500	-9.0000E-01
2.74000	-3.2040E+00	2.74500	-5.9280E+00	2.75000	-8.8990E+00	2.75500	-1.2440E+01	2.76000	-1.7300E+01
2.76500	-2.3380E+01	2.77000	-2.8530E+01	2.77500	-3.2080E+01	2.78000	-3.4010E+01	2.78500	-3.4970E+01
2.79000	-3.4920E+01	2.79500	-3.3310E+01	2.80000	-3.0120E+01	2.80500	-2.7260E+01	2.81000	-2.5730E+01
2.81500	-2.5470E+01	2.82000	-2.6100E+01	2.82500	-2.7270E+01	2.83000	-2.9350E+01	2.83500	-3.2820E+01
2.84000	-3.6710E+01	2.84500	-3.9450E+01	2.85000	-4.0490E+01	2.85500	-4.0210E+01	2.86000	-3.8640E+01
2.86500	-3.5670E+01	2.87000	-3.1380E+01	2.87500	-2.6640E+01	2.88000	-2.2390E+01	2.88500	-1.8950E+01
2.89000	-1.6210E+01	2.89500	-1.3900E+01	2.90000	-1.1820E+01	2.90500	-9.8960E+00	2.91000	-8.1500E+00
2.91500	-6.5940E+00	2.92000	-5.2240E+00	2.92500	-4.0040E+00	2.93000	-2.9690E+00	2.93500	-1.8340E+00
2.94000	-6.2100E-01	2.94500	7.5200E-01	2.95000	2.3670E+00	2.95500	4.2870E+00	2.96000	6.5320E+00
2.96500	9.1070E+00	2.97000	1.2080E+01	2.97500	1.5540E+01	2.98000	1.9370E+01	2.98500	2.3160E+01
2.99000	2.6400E+01	2.99500	2.8680E+01	3.00000	2.9770E+01				

A-254

CODE FOR OUTPUT TYPE = 3
 EQ.1, HISTORY TABLE
 EQ.2, PRINTER PLOT
 EQ.3, MAXIMA ONLY
 PRINTER PLOT SPACING = 0

DYNAMIC (INERTIA ONLY) RESPONSES

DISPLACEMENT MAXIMA,

A-257

NODE NUMBER	DISPLACEMENT COMPONENT	MAXIMUM VALUE	TIME AT MAXIMUM	DISPLACEMENT COMPONENT	MAXIMUM VALUE	TIME AT MAXIMUM
101	1	6.8637E-07	1.5130E+00	4	3.6631E-07	1.5180E+00
	2	4.0848E-07	1.5150E+00	5	6.1619E-07	1.5150E+00
	3	2.0668E-07	1.2900E-01	6	1.1544E-07	5.3600E-01
9001	1	7.2108E-02	1.5160E+00	4	9.2028E-04	1.5200E+00
	2	3.8968E-02	1.5190E+00	5	1.6157E-03	1.5180E+00
	3	4.3110E-02	1.5180E+00	6	3.1524E-04	5.3600E-01
110	1	1.3065E-01	1.5170E+00	4	9.6101E-04	1.2100E-01
	2	7.2482E-02	1.9430E+00	5	1.6399E-03	1.5200E+00
	3	1.7745E-01	1.5200E+00	6	6.0447E-04	5.3600E-01
120	1	1.3286E-01	1.5170E+00	4	9.5748E-04	1.2100E-01
	2	7.5424E-02	1.9430E+00	5	1.6190E-03	1.5200E+00
	3	1.9973E-01	1.5200E+00	6	6.1539E-04	5.3600E-01
130	1	1.3570E-01	1.5170E+00	4	9.5030E-04	1.2100E-01
	2	7.9143E-02	1.9420E+00	5	1.5904E-03	1.5200E+00
	3	2.2714E-01	1.5200E+00	6	6.2613E-04	5.3600E-01
140	1	1.4712E-01	1.5170E+00	4	8.9502E-04	1.2100E-01
	2	1.0771E-01	5.3700E-01	5	1.4577E-03	1.5180E+00
	3	3.2748E-01	1.5200E+00	6	6.4043E-04	5.3600E-01
9002	1	1.3061E-01	1.5200E+00	4	5.8586E-04	1.1900E-01
	2	1.2831E-01	5.3700E-01	5	9.2518E-04	1.5100E+00
	3	4.1797E-01	1.5190E+00	6	5.6454E-04	5.3600E-01
150	1	9.0973E-02	1.5230E+00	4	5.2871E-04	5.3800E-01
	2	1.0492E-01	5.3600E-01	5	5.2836E-04	1.5170E+00
	3	4.4005E-01	1.5190E+00	6	4.8682E-04	5.3600E-01
9003	1	5.1620E-02	1.5300E+00	4	4.9193E-04	5.3700E-01
	2	6.1593E-02	5.3600E-01	5	4.9439E-04	1.5200E+00
	3	4.3977E-01	1.5190E+00	6	4.2838E-04	5.3600E-01
9004	1	2.8101E-02	4.5000E-02	4	3.9242E-04	5.3700E-01
	2	3.0526E-02	1.7180E+00	5	5.9847E-04	1.5200E+00
	3	4.3918E-01	1.5190E+00	6	3.7373E-04	5.3600E-01
6020	1	4.0600E-02	1.5190E+00	4	2.2497E-04	5.3600E-01
	2	2.0622E-02	6.1000E-02	5	8.1072E-04	1.5200E+00
	3	4.3835E-01	1.5190E+00	6	3.2285E-04	5.3600E-01
9005	1	1.0692E-01	1.5190E+00	4	8.3397E-05	1.1600E-01
	2	1.7974E-02	6.1000E-02	5	8.6491E-04	1.5200E+00
	3	4.3725E-01	1.5190E+00	6	2.7247E-04	5.3600E-01
9006	1	1.6231E-01	1.5190E+00	4	1.1810E-04	6.1000E-02
	2	1.2450E-02	7.3000E-02	5	5.2824E-04	1.5120E+00
	3	4.3586E-01	1.5190E+00	6	2.2210E-04	5.3600E-01
6040	1	1.7981E-01	1.5190E+00	4	1.3716E-04	7.4000E-02
	2	2.8173E-03	2.7000E-02	5	5.2392E-04	1.3000E-02
	3	4.3419E-01	1.5190E+00	6	1.7179E-04	5.3500E-01
160	1	1.7673E-01	1.5190E+00	4	1.3348E-04	7.4000E-02
	2	2.4526E-03	1.1700E-01	5	5.1974E-04	1.3000E-02
	3	4.3382E-01	1.5190E+00	6	1.6182E-04	5.3500E-01

9007	1	1.3411E-01	2.1000E-02	4	1.1507E-04	1.2000E-01
	2	8.3777E-03	2.1000E-01	5	2.6249E-03	1.5200E+00
	3	3.7686E-01	1.5180E+00	6	1.4758E-04	6.0000E-02
170	1	1.3577E-01	2.0000E-02	4	1.1229E-04	1.2100E-01
	2	1.2187E-02	2.0800E-01	5	2.9313E-03	1.4810E+00
	3	1.6323E-01	1.5180E+00	6	1.0408E-04	5.9000E-02
6050	1	1.3546E-01	2.0000E-02	4	1.0970E-04	1.2100E-01
	2	1.2068E-02	2.0700E-01	5	2.7040E-03	1.4810E+00
	3	9.5090E-02	1.5190E+00	6	9.0965E-05	5.9000E-02
6060	1	1.3529E-01	2.0000E-02	4	1.0840E-04	1.2100E-01
	2	1.1936E-02	2.0700E-01	5	2.5550E-03	1.4810E+00
	3	7.0771E-02	2.0400E-01	6	8.4240E-05	4.6000E-02
9008	1	1.3402E-01	2.0000E-02	4	1.0109E-04	1.2000E-01
	2	1.0900E-02	5.9000E-02	5	1.7579E-03	1.4200E-01
	3	1.3854E-01	2.3800E-01	6	5.9095E-05	4.7000E-02
9039	1	1.3230E-01	2.0000E-02	4	9.3791E-05	1.2000E-01
	2	1.0401E-02	6.0000E-02	5	1.2045E-03	2.3700E-01
	3	2.3863E-01	2.3700E-01	6	4.9294E-05	4.8300E-01
9010	1	1.3011E-01	2.0000E-02	4	8.6492E-05	1.2000E-01
	2	6.3036E-03	6.1000E-02	5	6.5936E-04	2.3900E-01
	3	3.0389E-01	2.3700E-01	6	6.7872E-05	6.0000E-02
6070	1	1.2744E-01	2.0000E-02	4	7.9194E-05	1.2000E-01
	2	1.6897E-03	4.7000E-02	5	2.8060E-04	1.9800E-01
	3	3.2907E-01	2.3800E-01	6	5.4680E-05	6.2000E-02
6080	1	1.2572E-01	1.9000E-02	4	7.4117E-05	1.2000E-01
	2	2.6707E-03	8.4000E-02	5	4.3193E-04	1.4830E+00
	3	3.2264E-01	2.3800E-01	6	3.7178E-05	6.4000E-02
9011	1	1.2320E-01	1.9000E-02	4	6.7558E-05	1.2000E-01
	2	4.5200E-03	8.4000E-02	5	7.7585E-04	2.3700E-01
	3	2.8725E-01	2.3800E-01	6	2.0717E-05	1.3100E-01
180	1	1.1994E-01	1.8000E-02	4	6.0264E-05	1.1900E-01
	2	5.0758E-03	8.4000E-02	5	1.1255E-03	2.3800E-01
	3	2.1757E-01	2.3800E-01	6	7.9368E-06	6.1000E-02
9012	1	1.1799E-01	1.8000E-02	4	5.6221E-05	1.1900E-01
	2	4.3083E-03	8.5000E-02	5	1.1934E-03	2.3800E-01
	3	1.5965E-01	2.3800E-01	6	2.2712E-05	8.4000E-02
9013	1	1.1537E-01	1.8000E-02	4	5.2177E-05	1.1900E-01
	2	2.8452E-03	8.5000E-02	5	1.1047E-03	2.3800E-01
	3	1.0164E-01	2.3800E-01	6	3.0178E-05	8.6000E-02
6090	1	1.1265E-01	1.8000E-02	4	5.0157E-05	1.4300E-01
	2	1.5203E-03	8.4000E-02	5	8.9590E-04	2.3800E-01
	3	5.9373E-02	2.3800E-01	6	2.6047E-05	1.2200E-01
6091	1	1.1170E-01	1.8000E-02	4	4.9691E-05	1.4300E-01
	2	1.3493E-03	9.9000E-02	5	8.2340E-04	2.3800E-01
	3	5.0140E-02	2.3800E-01	6	2.3689E-05	1.9300E-01
190	1	1.0951E-01	1.8000E-02	4	4.8668E-05	1.4300E-01
	2	1.1870E-03	9.9000E-02	5	6.7694E-04	2.3800E-01
	3	3.5659E-02	2.3800E-01	6	1.9054E-05	1.9300E-01
200	1	1.0850E-01	1.8000E-02	4	1.8207E-05	1.4300E-01
	2	1.1558E-03	9.8000E-02	5	6.1637E-04	2.3800E-01

	3	3.0062E-02	2.3800E-01	6	1.7145E-05	1.9300E-01
210	1	1.0748E-01	1.8000E-02	4	4.7747E-05	1.4300E-01
	2	1.1446E-03	9.8000E-02	5	5.5903E-04	2.3800E-01
	3	2.4991E-02	2.3800E-01	6	1.5458E-05	1.9400E-01
220	1	1.0645E-01	1.8000E-02	4	4.7286E-05	1.4300E-01
	2	1.2126E-03	1.6500E-01	5	5.0486E-04	2.3800E-01
	3	2.0418E-02	2.3800E-01	6	1.4692E-05	4.3800E-01
230	1	1.0541E-01	1.8000E-02	4	4.6826E-05	1.4300E-01
	2	1.3015E-03	1.6500E-01	5	4.5379E-04	2.3800E-01
	3	1.6803E-02	1.5400E-01	6	1.4557E-05	4.3800E-01
239	1	1.0014E-01	1.8000E-02	4	4.4780E-05	1.4400E-01
	2	1.7923E-03	4.3700E-01	5	2.4585E-04	2.3700E-01
	3	6.2266E-03	4.3000E-02	6	1.2559E-05	4.3800E-01
240	1	9.7904E-02	1.8000E-02	4	4.4003E-05	1.4400E-01
	2	2.0178E-03	4.3700E-01	5	2.0065E-04	1.5700E-01
	3	5.0993E-03	8.4000E-02	6	1.1106E-05	4.3800E-01
250	1	9.2942E-02	1.8000E-02	4	4.1272E-05	1.4400E-01
	2	2.3968E-03	1.6300E-01	5	1.9296E-04	4.2000E-02
	3	5.9076E-03	2.3500E-01	6	8.8458E-06	1.1700E-01
260	1	8.7797E-02	1.8000E-02	4	3.7956E-05	1.4500E-01
	2	2.6687E-03	1.6300E-01	5	1.9051E-04	4.2000E-02
	3	9.5806E-03	4.2000E-02	6	5.0673E-06	1.1500E-01
261	1	8.5362E-02	1.8000E-02	4	3.6245E-05	1.4500E-01
	2	2.7266E-03	1.6300E-01	5	2.1211E-04	6.0000E-02
	3	1.2053E-02	4.2000E-02	6	4.7267E-06	6.9000E-02
9014	1	7.7385E-02	1.8000E-02	4	3.0827E-05	1.4500E-01
	2	2.5949E-03	1.6300E-01	5	2.1834E-04	6.0000E-02
	3	2.4011E-02	6.1000E-02	6	7.3336E-06	4.3700E-01
280	1	6.9046E-02	1.8000E-02	4	2.5409E-05	1.4500E-01
	2	2.0467E-03	1.6400E-01	5	1.1544E-04	1.0000E-02
	3	3.3817E-02	6.0000E-02	6	1.2304E-05	1.6300E-01
290	1	6.6196E-02	1.8000E-02	4	2.3612E-05	1.4600E-01
	2	1.7872E-03	1.6400E-01	5	1.7729E-04	6.2000E-02
	3	3.3268E-02	6.0000E-02	6	1.3575E-05	1.6300E-01
291	1	6.4823E-02	1.8000E-02	4	2.2784E-05	1.4600E-01
	2	1.6536E-03	1.6400E-01	5	2.6031E-04	6.2000E-02
	3	3.1993E-02	6.0000E-02	6	1.3988E-05	1.6400E-01
300	1	6.2981E-02	1.8000E-02	4	2.1680E-05	1.4600E-01
	2	1.4690E-03	1.6400E-01	5	3.8337E-04	6.2000E-02
	3	2.9140E-02	5.9000E-02	6	1.4405E-05	1.6400E-01
310	1	6.1691E-02	2.4000E-02	4	2.0716E-05	1.4600E-01
	2	9.9724E-04	1.6500E-01	5	5.1433E-04	6.1000E-02
	3	2.8181E-02	4.3000E-02	6	1.4313E-05	1.6400E-01
315	1	9.6135E-02	2.4000E-02	4	2.0731E-05	1.4600E-01
	2	1.4315E-03	2.1770E+00	5	5.1985E-04	6.1000E-02
	3	2.8269E-02	4.3000E-02	6	1.4313E-05	1.6400E-01
320	1	5.9907E-02	2.4000E-02	4	1.8740E-05	1.4600E-01
	2	5.4433E-04	1.6500E-01	5	4.0136E-04	6.1000E-02
	3	2.4480E-02	4.3000E-02	6	1.3696E-05	1.6400E-01

330	1	5.6715E-02	2.4000E-02	4	1.5158E-05	1.4600E-01
	2	2.8578E-04	1.6500E-01	5	2.7192E-04	6.0000E-02
	3	1.8033E-02	4.3000E-02	6	1.2018E-05	1.6400E-01
340	1	5.3324E-02	2.4000E-02	4	1.1386E-05	1.4600E-01
	2	5.6442E-05	5.3000E-02	5	2.1801E-04	4.3000E-02
	3	1.1502E-02	1.0000E-02	6	9.7754E-06	1.6400E-01
1000	1	9.7348E-02	1.8000E-02	4	4.4290E-05	1.4400E-01
	2	1.9782E-03	8.2600E-01	5	2.2196E-04	1.5600E-01
	3	5.1567E-03	8.3000E-02	6	1.1101E-05	4.3800E-01
1002	1	9.6861E-02	1.8000E-02	4	4.8639E-05	1.4400E-01
	2	2.0531E-03	8.2600E-01	5	6.1379E-04	3.5000E-02
	3	5.2273E-03	8.3000E-02	6	1.1007E-05	4.3800E-01
1003	1	9.4160E-02	1.8000E-02	4	5.6878E-05	1.4500E-01
	2	2.2557E-03	8.2600E-01	5	1.4477E-03	3.5000E-02
	3	5.3678E-03	8.3000E-02	6	1.1876E-05	2.5300E-01
1010	1	9.2460E-02	2.5000E-02	4	6.4838E-05	1.4600E-01
	2	2.5499E-03	8.2600E-01	5	2.2183E-03	3.5000E-02
	3	5.5219E-03	8.3000E-02	6	1.2939E-05	2.5300E-01
1020	1	1.1283E-01	3.2000E-02	4	6.8962E-05	1.4600E-01
	2	3.3918E-03	8.2600E-01	5	2.6081E-03	6.0000E-02
	3	5.6458E-03	8.3000E-02	6	1.3746E-05	2.5300E-01
1025	1	1.5642E-01	3.4000E-02	4	6.8962E-05	1.4600E-01
	2	4.2680E-03	8.2600E-01	5	2.6081E-03	6.0000E-02
	3	5.6483E-03	8.3000E-02	6	1.3746E-05	2.5300E-01
1040	1	1.1286E-01	3.2000E-02	4	7.6582E-05	1.4600E-01
	2	3.3933E-03	8.2600E-01	5	2.6137E-03	6.0000E-02
	3	5.8058E-03	8.3000E-02	6	1.4319E-05	1.6500E-01
1050	1	1.1291E-01	3.2000E-02	4	8.2899E-05	1.4600E-01
	2	3.3952E-03	8.2600E-01	5	2.6208E-03	6.0000E-02
	3	5.9244E-03	8.3000E-02	6	1.5467E-05	1.6300E-01
1060	1	1.5243E-01	3.4000E-02	4	1.9943E-04	5.0000E-03
	2	5.6034E-03	8.2600E-01	5	2.6813E-03	6.0000E-02
	3	7.2554E-03	2.7700E-01	6	6.1752E-05	6.2000E-02
1070	1	1.7874E-01	3.4000E-02	4	2.0037E-04	5.0000E-03
	2	7.2146E-03	8.2600E-01	5	2.6826E-03	6.0000E-02
	3	7.2576E-03	2.7700E-01	6	6.1752E-05	6.2000E-02
1080	1	1.1498E-01	3.3000E-02	4	6.3992E-05	4.2200E-01
	2	3.4259E-03	8.2600E-01	5	2.6135E-03	6.0000E-02
	3	5.6590E-03	8.3000E-02	6	1.5662E-05	2.0500E-01
1090	1	1.1506E-01	3.3000E-02	4	7.4204E-05	4.2200E-01
	2	3.4241E-03	8.2600E-01	5	2.6204E-03	6.0000E-02
	3	5.7176E-03	8.3000E-02	6	1.7262E-05	2.0500E-01
1100	1	1.5256E-01	3.4000E-02	4	2.2372E-04	5.0000E-03
	2	5.1974E-03	5.4600E-01	5	2.6785E-03	6.0000E-02
	3	7.7046E-03	4.3000E-02	6	7.3633E-05	5.9000E-02
1110	1	1.7888E-01	3.4000E-02	4	2.2473E-04	5.0000E-03
	2	6.9836E-03	5.4600E-01	5	2.6798E-03	6.0000E-02
	3	7.7073E-03	4.3000E-02	6	7.3633E-05	5.9000E-02
1120	1	9.2270E-02	1.8000E-02	4	4.1453E-05	1.4400E-01
	2	2.3477E-03	4.3700E-01	5	2.1262E-04	4.2000E-02

	3	5.9041E-03	2.3500E-01	6	8.8463E-06	1.1700E-01
1122	1	9.1833E-02	1.8000E-02	4	4.4821E-05	1.4500E-01
	2	2.3465E-03	4.3700E-01	5	6.2028E-04	3.5000E-02
	3	5.8998E-03	2.3500E-01	6	8.8560E-06	1.1700E-01
1123	1	8.9484E-02	1.8000E-02	4	5.2132E-05	1.4600E-01
	2	2.4844E-03	1.8930E+00	5	1.3992E-03	3.5000E-02
	3	5.8913E-03	2.3500E-01	6	9.0394E-06	1.1600E-01
1130	1	8.9793E-02	2.5000E-02	4	6.0327E-05	1.4700E-01
	2	2.7403E-03	1.8940E+00	5	2.1160E-03	3.5000E-02
	3	5.8820E-03	2.3500E-01	6	9.4246E-06	1.6300E-01
1140	1	1.0871E-01	3.2000E-02	4	6.5616E-05	1.4700E-01
	2	3.4884E-03	8.2700E-01	5	2.4737E-03	3.5000E-02
	3	5.8743E-03	2.3500E-01	6	9.7955E-06	1.6400E-01
1145	1	1.5019E-01	3.4000E-02	4	6.5617E-05	1.4700E-01
	2	4.2822E-03	8.2700E-01	5	2.4737E-03	3.5000E-02
	3	5.8742E-03	2.3500E-01	6	9.7955E-06	1.6400E-01
1160	1	1.0877E-01	3.2000E-02	4	6.6964E-05	1.4700E-01
	2	3.4889E-03	8.2700E-01	5	2.4768E-03	3.5000E-02
	3	5.6448E-03	1.6200E-01	6	1.3322E-05	1.6200E-01
1170	1	1.0883E-01	3.2000E-02	4	6.8251E-05	1.4700E-01
	2	3.4894E-03	8.2700E-01	5	2.4807E-03	3.5000E-02
	3	5.6970E-03	1.6200E-01	6	1.5057E-05	1.6100E-01
1180	1	1.4635E-01	3.4000E-02	4	8.3560E-05	1.4700E-01
	2	4.5290E-03	8.2700E-01	5	2.5120E-03	3.5000E-02
	3	5.8405E-03	1.6200E-01	6	6.0844E-05	6.1000E-02
1190	1	1.7137E-01	3.4000E-02	4	8.3682E-05	1.4700E-01
	2	5.2591E-03	8.2700E-01	5	2.5122E-03	3.5000E-02
	3	5.8406E-03	1.6200E-01	6	6.0844E-05	6.1000E-02
1200	1	1.0879E-01	3.2000E-02	4	6.5179E-05	1.4700E-01
	2	3.4881E-03	8.2700E-01	5	2.4769E-03	3.5000E-02
	3	6.1729E-03	2.3500E-01	6	1.2857E-05	8.3000E-02
1210	1	1.0886E-01	3.2000E-02	4	6.4700E-05	1.4700E-01
	2	3.4877E-03	8.2700E-01	5	2.4809E-03	3.5000E-02
	3	6.2960E-03	2.3600E-01	6	1.5708E-05	8.4000E-02
1220	1	1.4638E-01	3.4000E-02	4	6.8938E-05	1.6000E-02
	2	4.1585E-03	1.8950E+00	5	2.5132E-03	3.5000E-02
	3	6.5960E-03	2.3600E-01	6	6.3121E-05	6.0000E-02
1230	1	1.7142E-01	3.4000E-02	4	6.9240E-05	1.6000E-02
	2	4.7964E-03	8.8300E-01	5	2.5135E-03	3.5000E-02
	3	6.5958E-03	2.3600E-01	6	6.3121E-05	6.0000E-02
1240	1	8.6693E-02	1.7000E-02	4	3.8126E-05	1.4500E-01
	2	2.5965E-03	1.6300E-01	5	2.0831E-04	4.2000E-02
	3	9.6756E-03	4.2000E-02	6	5.0784E-06	1.1500E-01
1242	1	8.6273E-02	1.7000E-02	4	4.1304E-05	1.4600E-01
	2	2.5809E-03	1.6300E-01	5	5.8126E-04	3.6000E-02
	3	9.7887E-03	4.2000E-02	6	5.2837E-06	1.1500E-01
1243	1	8.4187E-02	1.8000E-02	4	4.8811E-05	1.4700E-01
	2	2.5809E-03	1.8940E+00	5	1.3247E-03	3.5000E-02
	3	1.0014E-02	4.2000E-02	6	5.8102E-06	1.1600E-01

1250	1	8.5768E-02	2.5000E-02	4	5.7538E-05	1.4700E-01
	2	2.8342E-03	1.8940E+00	5	2.0156E-03	3.4000E-02
	3	1.0260E-02	4.2000E-02	6	6.4063E-06	1.1600E-01
1260	1	1.0389E-01	3.0000E-02	4	6.3417E-05	1.4700E-01
	2	3.6189E-03	7.6900E-01	5	2.3656E-03	3.4000E-02
	3	1.0458E-02	4.2000E-02	6	6.8588E-06	1.1600E-01
1265	1	1.4289E-01	3.4000E-02	4	6.3417E-05	1.4700E-01
	2	4.4567E-03	7.6900E-01	5	2.3656E-03	3.4000E-02
	3	1.0462E-02	4.2000E-02	6	6.8588E-06	1.1600E-01
1280	1	1.0395E-01	3.0000E-02	4	6.0594E-05	7.7000E-01
	2	3.6203E-03	7.6900E-01	5	2.3688E-03	3.4000E-02
	3	1.0896E-02	4.3000E-02	6	9.6064E-06	3.9000E-02
1290	1	1.0401E-01	3.0000E-02	4	6.9513E-05	7.7000E-01
	2	3.6219E-03	7.6900E-01	5	2.3728E-03	3.4000E-02
	3	1.1185E-02	4.3000E-02	6	1.2747E-05	3.9000E-02
1300	1	1.3921E-01	3.4000E-02	4	1.8562E-04	5.0000E-03
	2	5.7861E-03	7.6900E-01	5	2.4050E-03	3.4000E-02
	3	1.3229E-02	4.3000E-02	6	5.6481E-05	5.9000E-02
1310	1	1.6325E-01	3.4000E-02	4	1.8640E-04	5.0000E-03
	2	7.3570E-03	7.6900E-01	5	2.4053E-03	3.4000E-02
	3	1.3232E-02	4.3000E-02	6	5.6481E-05	5.9000E-02
1320	1	1.0397E-01	3.0000E-02	4	7.3205E-05	1.4700E-01
	2	3.6177E-03	7.6900E-01	5	2.3689E-03	3.4000E-02
	3	1.0318E-02	4.2000E-02	6	1.1306E-05	8.3000E-02
1330	1	1.0403E-01	3.0000E-02	4	8.0988E-05	1.4700E-01
	2	3.6162E-03	7.6900E-01	5	2.3730E-03	3.4000E-02
	3	1.0335E-02	4.2000E-02	6	1.3910E-05	8.4000E-02
1340	1	1.3927E-01	3.3000E-02	4	1.9720E-04	5.0000E-03
	2	5.6526E-03	4.8800E-01	5	2.4062E-03	3.4000E-02
	3	1.1297E-02	4.3000E-02	6	5.4335E-05	6.0000E-02
1350	1	1.6333E-01	3.4000E-02	4	1.9804E-04	5.0000E-03
	2	7.2874E-03	4.8800E-01	5	2.4065E-03	3.4000E-02
	3	1.1300E-02	4.3000E-02	6	5.4335E-05	6.0000E-02
4000	1	6.6353E-02	1.7000E-02	4	2.3623E-05	1.4500E-01
	2	1.9607E-03	1.1400E-01	5	1.7433E-04	6.2000E-02
	3	3.3264E-02	6.0000E-02	6	1.3575E-05	1.6300E-01
4010	1	6.6577E-02	1.7000E-02	4	2.3693E-05	1.4500E-01
	2	2.0364E-03	1.1400E-01	5	1.6882E-04	1.0000E-02
	3	3.3261E-02	6.0000E-02	6	1.3575E-05	1.6300E-01
4020	1	6.8497E-02	1.7000E-02	4	2.3901E-05	1.1400E-01
	2	2.4902E-03	1.1400E-01	5	1.6244E-04	1.0000E-02
	3	3.3251E-02	6.0000E-02	6	1.3575E-05	1.6300E-01
4030	1	6.9243E-02	1.7000E-02	4	2.3940E-05	1.1400E-01
	2	2.6586E-03	1.1400E-01	5	1.6225E-04	1.0000E-02
	3	3.3250E-02	6.0000E-02	6	1.3575E-05	1.6300E-01

ACCELERATION MAXIMA

NODE NUMBER	ACCELERATION COMPONENT	MAXIMUM VALUE	TIME AT MAXIMUM	ACCELERATION COMPONENT	MAXIMUM VALUE	TIME AT MAXIMUM
101	1	3.4783E+02	1.5060E+00			
	2	3.4783E+02	1.5060E+00	4	2.7460E-05	4.6000E-02
	3	3.4783E+02	1.5060E+00	5	3.0281E-05	3.2000E-02
9001	1	3.4779E+02	1.5060E+00	6	3.2615E-06	4.4000E-02
	2	3.4772E+02	1.5060E+00	4	4.0293E-02	4.4000E-02
	3	3.4787E+02	1.5060E+00	5	3.2235E-02	5.7000E-02
110	1	3.4780E+02	1.5060E+00	6	6.8166E-03	1.0100E-01
	2	3.4762E+02	1.5060E+00	4	1.7367E-02	6.4000E-02
	3	3.4798E+02	1.5060E+00	5	2.9713E-02	3.1000E-02
120	1	3.4780E+02	1.5060E+00	6	2.1020E-02	2.2000E-02
	2	3.4762E+02	1.5060E+00	4	1.6907E-02	1.0000E-01
	3	3.4799E+02	1.5060E+00	5	2.5405E-02	4.7000E-02
130	1	3.4780E+02	1.5060E+00	6	2.1260E-02	2.2000E-02
	2	3.4761E+02	1.5060E+00	4	1.7538E-02	1.0000E-01
	3	3.4801E+02	1.5060E+00	5	2.3314E-02	2.3000E-02
140	1	3.4781E+02	1.5060E+00	6	2.0940E-02	2.2000E-02
	2	3.4760E+02	1.5060E+00	4	2.0568E-02	2.2000E-02
	3	3.4805E+02	1.5060E+00	5	3.6685E-02	4.2000E-02
9002	1	3.4776E+02	1.5060E+00	6	1.5507E-02	4.4000E-02
	2	3.4767E+02	1.5060E+00	4	2.6027E-02	5.0000E-02
	3	3.4805E+02	1.5060E+00	5	4.8389E-02	2.2000E-02
150	1	3.4773E+02	1.5060E+00	6	2.8685E-02	3.3000E-02
	2	3.4778E+02	1.5060E+00	4	3.1195E-02	4.4000E-02
	3	3.4806E+02	1.5060E+00	5	5.0411E-02	3.6000E-02
9003	1	3.4784E+02	1.5060E+00	6	2.6344E-02	3.3000E-02
	2	3.4790E+02	1.5060E+00	4	2.9060E-02	6.2000E-02
	3	3.4806E+02	1.5060E+00	5	5.3268E-02	3.2000E-02
9004	1	3.4800E+02	1.5060E+00	6	2.3913E-02	3.3000E-02
	2	3.4798E+02	1.5060E+00	4	2.7010E-02	3.7000E-02
	3	3.4806E+02	1.5060E+00	5	5.2406E-02	3.7000E-02
6020	1	3.4816E+02	1.5060E+00	6	2.1640E-02	3.3000E-02
	2	3.4801E+02	1.5060E+00	4	1.9199E-02	4.6000E-02
	3	3.4806E+02	1.5060E+00	5	5.7302E-02	1.2000E-02
9005	1	3.4831E+02	1.5060E+00	6	1.9794E-02	3.4000E-02
	2	3.4803E+02	1.5060E+00	4	2.2384E-02	4.7000E-02
	3	3.4806E+02	1.5060E+00	5	5.9819E-02	2.6000E-02
9006	1	3.4829E+02	1.5060E+00	6	1.8188E-02	3.4000E-02
	2	3.4797E+02	1.5060E+00	4	1.7796E-02	6.2000E-02
	3	3.4806E+02	1.5060E+00	5	6.1610E-02	1.4000E-02
6040	1	3.4807E+02	1.5060E+00	6	1.6583E-02	3.4000E-02
	2	3.4785E+02	1.5060E+00	4	2.2484E-02	2.0000E-02
	3	3.4806E+02	1.5060E+00	5	7.8482E-02	1.2000E-02
160	1	3.4802E+02	1.5060E+00	6	1.4977E-02	3.4000E-02
	2	3.4782E+02	1.5060E+00	4	2.2475E-02	2.1000E-02
	3	3.4806E+02	1.5060E+00	5	8.0699E-02	2.7000E-02
				6	1.4869E-02	4.1000E-02

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9007	1	3.4774E+02	1.5060E+00	4	2.0661E-02	3.6000E-02
	2	3.4775E+02	1.5060E+00	5	8.6786E-02	1.0000E-02
	3	3.4795E+02	1.5060E+00	6	1.8709E-02	4.1000E-02
170	1	3.4768E+02	1.5060E+00	4	1.5061E-02	3.6000E-02
	2	3.4778E+02	1.5060E+00	5	4.5787E-02	9.0000E-03
	3	3.4786E+02	1.5060E+00	6	1.8388E-02	3.6000E-02
6050	1	3.4768E+02	1.5060E+00	4	1.4646E-02	3.6000E-02
	2	3.4781E+02	1.5060E+00	5	5.6556E-02	9.0000E-03
	3	3.4786E+02	1.5060E+00	6	1.6211E-02	3.6000E-02
6060	1	3.4768E+02	1.5060E+00	4	1.4438E-02	3.6000E-02
	2	3.4782E+02	1.5060E+00	5	5.9055E-02	9.0000E-03
	3	3.4787E+02	1.5060E+00	6	1.4610E-02	3.6000E-02
9008	1	3.4768E+02	1.5060E+00	4	1.3244E-02	3.6000E-02
	2	3.4786E+02	1.5060E+00	5	4.9356E-02	2.6000E-02
	3	3.4787E+02	1.5060E+00	6	1.2785E-02	4.6000E-02
9009	1	3.4769E+02	1.5060E+00	4	1.2050E-02	3.6000E-02
	2	3.4788E+02	1.5060E+00	5	4.1360E-02	1.3000E-02
	3	3.4782E+02	1.5060E+00	6	9.0462E-03	4.1000E-02
9010	1	3.4769E+02	1.5060E+00	4	1.0931E-02	7.3000E-02
	2	3.4786E+02	1.5060E+00	5	4.7379E-02	1.5000E-02
	3	3.4771E+02	1.5060E+00	6	7.9239E-03	5.9000E-02
6070	1	3.4769E+02	1.5060E+00	4	9.9233E-03	7.3000E-02
	2	3.4784E+02	1.5060E+00	5	3.4136E-02	3.2000E-02
	3	3.4763E+02	1.5060E+00	6	9.9844E-03	4.6000E-02
6080	1	3.4770E+02	1.5060E+00	4	9.2222E-03	7.3000E-02
	2	3.4782E+02	1.5060E+00	5	3.8038E-02	1.4000E-02
	3	3.4762E+02	1.5060E+00	6	5.9483E-03	4.7000E-02
9011	1	3.4770E+02	1.5060E+00	4	8.3164E-03	7.3000E-02
	2	3.4782E+02	1.5060E+00	5	4.4359E-02	2.0000E-02
	3	3.4766E+02	1.5060E+00	6	4.6631E-03	6.4000E-02
180	1	3.4771E+02	1.5060E+00	4	7.2939E-03	7.3000E-02
	2	3.4782E+02	1.5060E+00	5	3.0868E-02	3.8000E-02
	3	3.4775E+02	1.5060E+00	6	2.8863E-03	4.5000E-02
9012	1	3.4772E+02	1.5060E+00	4	6.7134E-03	7.3000E-02
	2	3.4782E+02	1.5060E+00	5	4.0493E-02	2.0000E-02
	3	3.4781E+02	1.5060E+00	6	3.3267E-03	6.4000E-02
9013	1	3.4772E+02	1.5060E+00	4	6.1689E-03	7.4000E-02
	2	3.4782E+02	1.5060E+00	5	4.1907E-02	2.0000E-02
	3	3.4785E+02	1.5060E+00	6	5.0342E-03	6.4000E-02
6090	1	3.4773E+02	1.5060E+00	4	5.7510E-03	7.4000E-02
	2	3.4783E+02	1.5060E+00	5	2.9440E-02	3.2000E-02
	3	3.4786E+02	1.5060E+00	6	4.2196E-03	8.8000E-02
6091	1	3.4773E+02	1.5060E+00	4	5.6360E-03	7.4000E-02
	2	3.4783E+02	1.5060E+00	5	2.6971E-02	3.8000E-02
	3	3.4786E+02	1.5060E+00	6	3.7069E-03	8.8000E-02
190	1	3.4774E+02	1.5060E+00	4	5.3835E-03	7.4000E-02
	2	3.4783E+02	1.5060E+00	5	2.8541E-02	5.0000E-03
	3	3.4785E+02	1.5060E+00	6	2.4596E-03	8.8000E-02
200	1	3.4774E+02	1.5060E+00	4	5.2699E-03	7.4000E-02
	2	3.4783E+02	1.5060E+00	5	3.0375E-02	1.0000E-02

	3	3.4785E+02	1.5060E+00	6	1.8674E-03	8.8000E-02
210	1	3.4774E+02	1.5060E+00	4	5.1563E-03	7.4000E-02
	2	3.4783E+02	1.5060E+00	5	3.1881E-02	1.0000E-02
	3	3.4785E+02	1.5060E+00	6	1.8164E-03	6.9000E-02
220	1	3.4775E+02	1.5060E+00	4	5.0428E-03	7.4000E-02
	2	3.4783E+02	1.5060E+00	5	3.2133E-02	1.0000E-02
	3	3.4784E+02	1.5060E+00	6	2.2834E-03	6.9000E-02
230	1	3.4775E+02	1.5060E+00	4	4.9292E-03	7.4000E-02
	2	3.4783E+02	1.5060E+00	5	3.2869E-02	1.5000E-02
	3	3.4784E+02	1.5060E+00	6	2.7224E-03	6.9000E-02
239	1	3.4776E+02	1.5060E+00	4	4.6186E-03	5.3000E-02
	2	3.4783E+02	1.5060E+00	5	2.9007E-02	2.6000E-02
	3	3.4782E+02	1.5060E+00	6	4.0782E-03	6.4000E-02
240	1	3.4776E+02	1.5060E+00	4	4.5033E-03	5.3000E-02
	2	3.4783E+02	1.5060E+00	5	3.1720E-02	4.3000E-02
	3	3.4782E+02	1.5060E+00	6	4.0362E-03	6.4000E-02
250	1	3.4778E+02	1.5060E+00	4	4.3726E-03	5.3000E-02
	2	3.4783E+02	1.5060E+00	5	5.8271E-02	5.0000E-03
	3	3.4782E+02	1.5060E+00	6	2.6740E-03	4.9000E-02
260	1	3.4779E+02	1.5060E+00	4	4.2796E-03	5.3000E-02
	2	3.4783E+02	1.5060E+00	5	6.3408E-02	5.0000E-03
	3	3.4785E+02	1.5060E+00	6	1.0092E-03	3.6000E-02
261	1	3.4779E+02	1.5060E+00	4	4.2286E-03	5.3000E-02
	2	3.4783E+02	1.5060E+00	5	5.7341E-02	5.0000E-03
	3	3.4787E+02	1.5060E+00	6	2.1376E-03	5.3000E-02
9014	1	3.4781E+02	1.5060E+00	4	4.0672E-03	5.3000E-02
	2	3.4783E+02	1.5060E+00	5	2.3501E-02	4.7000E-02
	3	3.4794E+02	1.5060E+00	6	4.1465E-03	5.9000E-02
280	1	3.4783E+02	1.5060E+00	4	3.9058E-03	5.3000E-02
	2	3.4783E+02	1.5060E+00	5	7.1407E-02	1.0000E-02
	3	3.4796E+02	1.5060E+00	6	2.0859E-03	5.9000E-02
290	1	3.4784E+02	1.5060E+00	4	3.8520E-03	5.3000E-02
	2	3.4783E+02	1.5060E+00	5	8.4135E-02	1.0000E-02
	3	3.4794E+02	1.5060E+00	6	1.1170E-03	9.4000E-02
291	1	3.4784E+02	1.5060E+00	4	3.7073E-03	6.9000E-02
	2	3.4783E+02	1.5060E+00	5	8.5734E-02	1.0000E-02
	3	3.4793E+02	1.5060E+00	6	1.0844E-03	1.1300E-01
300	1	3.4784E+02	1.5060E+00	4	3.5172E-03	6.9000E-02
	2	3.4783E+02	1.5060E+00	5	8.4784E-02	1.0000E-02
	3	3.4790E+02	1.5060E+00	6	1.5891E-03	6.9000E-02
310	1	3.4785E+02	1.5060E+00	4	3.3511E-03	6.9000E-02
	2	3.4783E+02	1.5060E+00	5	7.9184E-02	1.6000E-02
	3	3.4781E+02	1.5060E+00	6	2.1086E-03	6.9000E-02
315	1	3.4810E+02	1.5060E+00	4	3.3534E-03	6.9000E-02
	2	3.4783E+02	1.5060E+00	5	8.0258E-02	1.6000E-02
	3	3.4780E+02	1.5060E+00	6	2.1086E-03	6.9000E-02
320	1	3.4785E+02	1.5060E+00	4	3.0314E-03	6.9000E-02
	2	3.4783E+02	1.5060E+00	5	3.6007E-02	2.2000E-02
	3	3.4773E+02	1.5060E+00	6	2.3496E-03	6.9000E-02

330	1	3.4784E+02	1.5060E+00	4	2.4520E-03	6.9000E-02
	2	3.4783E+02	1.5060E+00	5	2.3571E-02	4.5000E-02
	3	3.4773E+02	1.5060E+00	6	2.4002E-03	6.9000E-02
340	1	3.4784E+02	1.5060E+00	4	1.8419E-03	6.9000E-02
	2	3.4783E+02	1.5060E+00	5	2.6995E-02	9.0000E-03
	3	3.4774E+02	1.5060E+00	6	2.0788E-03	6.9000E-02
1000	1	3.4776E+02	1.5060E+00	4	4.4555E-03	5.3000E-02
	2	3.4783E+02	1.5060E+00	5	3.2287E-02	4.3000E-02
	3	3.4782E+02	1.5060E+00	6	3.9914E-03	6.4000E-02
1002	1	3.4776E+02	1.5060E+00	4	3.3510E-03	5.3000E-02
	2	3.4783E+02	1.5060E+00	5	4.5840E-02	3.3000E-02
	3	3.4782E+02	1.5060E+00	6	3.1622E-03	6.4000E-02
1003	1	3.4775E+02	1.5060E+00	4	2.5605E-03	9.9000E-02
	2	3.4783E+02	1.5060E+00	5	1.0162E-01	1.6000E-02
	3	3.4782E+02	1.5060E+00	6	1.6221E-03	9.4000E-02
1010	1	3.4773E+02	1.5060E+00	4	3.6842E-03	5.8000E-02
	2	3.4784E+02	1.5060E+00	5	1.6578E-01	1.6000E-02
	3	3.4782E+02	1.5060E+00	6	1.1545E-03	9.6000E-02
1020	1	3.4765E+02	1.5060E+00	4	6.2681E-03	5.8000E-02
	2	3.4784E+02	1.5060E+00	5	2.0485E-01	1.0000E-03
	3	3.4782E+02	1.5060E+00	6	2.2626E-03	6.9000E-02
1025	1	3.4757E+02	1.5060E+00	4	6.2681E-03	5.8000E-02
	2	3.4784E+02	1.5060E+00	5	2.0485E-01	1.0000E-03
	3	3.4782E+02	1.5060E+00	6	2.2626E-03	6.9000E-02
1040	1	3.4765E+02	1.5060E+00	4	1.0334E-02	1.0000E-02
	2	3.4784E+02	1.5060E+00	5	2.0588E-01	1.0000E-03
	3	3.4782E+02	1.5060E+00	6	2.4845E-03	5.3000E-02
1050	1	3.4765E+02	1.5060E+00	4	1.9270E-02	1.0000E-02
	2	3.4784E+02	1.5060E+00	5	2.0720E-01	1.0000E-03
	3	3.4782E+02	1.5060E+00	6	2.6547E-03	3.8000E-02
1060	1	3.4758E+02	1.5060E+00	4	1.1001E-01	5.0000E-03
	2	3.4784E+02	1.5060E+00	5	2.1881E-01	1.0000E-03
	3	3.4781E+02	1.5060E+00	6	1.0775E-02	1.0000E-03
1070	1	3.4753E+02	1.5060E+00	4	1.1051E-01	5.0000E-03
	2	3.4784E+02	1.5060E+00	5	2.1912E-01	1.0000E-03
	3	3.4781E+02	1.5060E+00	6	1.0775E-02	1.0000E-03
1080	1	3.4765E+02	1.5060E+00	4	1.3673E-02	5.0000E-03
	2	3.4784E+02	1.5060E+00	5	2.0570E-01	1.0000E-03
	3	3.4782E+02	1.5060E+00	6	2.4186E-03	6.9000E-02
1090	1	3.4765E+02	1.5060E+00	4	2.3696E-02	5.0000E-03
	2	3.4784E+02	1.5060E+00	5	2.0685E-01	1.0000E-03
	3	3.4782E+02	1.5060E+00	6	2.7467E-03	6.9000E-02
1100	1	3.4758E+02	1.5060E+00	4	1.2588E-01	5.0000E-03
	2	3.4784E+02	1.5060E+00	5	2.1690E-01	1.0000E-03
	3	3.4782E+02	1.5060E+00	6	9.2154E-03	1.0000E-02
1110	1	3.4753E+02	1.5060E+00	4	1.2644E-01	5.0000E-03
	2	3.4784E+02	1.5060E+00	5	2.1720E-01	1.0000E-03
	3	3.4782E+02	1.5060E+00	6	9.2154E-03	1.0000E-03
1120	1	3.4777E+02	1.5060E+00	4	4.3327E-03	5.3000E-02
	2	3.4783E+02	1.5060E+00	5	5.6838E-02	5.0000E-03

	3	3.4782E+02	1.5060E+00	6	2.6464E-03	4.9000E-02
1122	1	3.4776E+02	1.5060E+00	4	3.1459E-03	9.8000E-02
	2	3.4783E+02	1.5060E+00	5	4.9110E-02	3.3000E-02
	3	3.4782E+02	1.5060E+00	6	2.1374E-03	4.9000E-02
1123	1	3.4775E+02	1.5060E+00	4	2.4087E-03	9.9000E-02
	2	3.4783E+02	1.5060E+00	5	9.0282E-02	1.6000E-02
	3	3.4782E+02	1.5060E+00	6	1.3118E-03	9.4000E-02
1130	1	3.4773E+02	1.5060E+00	4	6.4818E-03	5.9000E-02
	2	3.4783E+02	1.5060E+00	5	1.7019E-01	1.0000E-03
	3	3.4782E+02	1.5060E+00	6	1.0532E-03	8.4000E-02
1140	1	3.4765E+02	1.5060E+00	4	1.0598E-02	5.9000E-02
	2	3.4783E+02	1.5060E+00	5	2.2270E-01	1.0000E-03
	3	3.4782E+02	1.5060E+00	6	1.8322E-03	8.4000E-02
1145	1	3.4757E+02	1.5060E+00	4	1.0598E-02	5.9000E-02
	2	3.4784E+02	1.5060E+00	5	2.2271E-01	1.0000E-03
	3	3.4782E+02	1.5060E+00	6	1.8322E-03	8.4000E-02
1160	1	3.4765E+02	1.5060E+00	4	1.2499E-02	5.9000E-02
	2	3.4783E+02	1.5060E+00	5	2.2392E-01	1.0000E-03
	3	3.4782E+02	1.5060E+00	6	2.2663E-03	3.8000E-02
1170	1	3.4765E+02	1.5060E+00	4	1.4101E-02	5.9000E-02
	2	3.4783E+02	1.5060E+00	5	2.2547E-01	1.0000E-03
	3	3.4782E+02	1.5060E+00	6	2.4799E-03	3.8000E-02
1180	1	3.4758E+02	1.5060E+00	4	3.9932E-02	1.5000E-02
	2	3.4784E+02	1.5060E+00	5	2.3921E-01	1.0000E-03
	3	3.4782E+02	1.5060E+00	6	1.2097E-02	1.0000E-03
1190	1	3.4753E+02	1.5060E+00	4	4.0093E-02	1.5000E-02
	2	3.4784E+02	1.5060E+00	5	2.3958E-01	1.0000E-03
	3	3.4782E+02	1.5060E+00	6	1.2097E-02	1.0000E-03
1200	1	3.4765E+02	1.5060E+00	4	1.0877E-02	5.8000E-02
	2	3.4783E+02	1.5060E+00	5	2.2396E-01	1.0000E-03
	3	3.4782E+02	1.5060E+00	6	2.0483E-03	8.4000E-02
1210	1	3.4765E+02	1.5060E+00	4	1.1270E-02	5.8000E-02
	2	3.4783E+02	1.5060E+00	5	2.2554E-01	1.0000E-03
	3	3.4782E+02	1.5060E+00	6	2.3608E-03	8.4000E-02
1220	1	3.4758E+02	1.5060E+00	4	4.1643E-02	1.5000E-02
	2	3.4783E+02	1.5060E+00	5	2.3960E-01	1.0000E-03
	3	3.4782E+02	1.5060E+00	6	1.2644E-02	5.0000E-03
1230	1	3.4753E+02	1.5060E+00	4	4.1812E-02	1.5000E-02
	2	3.4783E+02	1.5060E+00	5	2.3998E-01	1.0000E-03
	3	3.4782E+02	1.5060E+00	6	1.2644E-02	5.0000E-03
1240	1	3.4777E+02	1.5060E+00	4	4.2500E-03	5.3000E-02
	2	3.4783E+02	1.5060E+00	5	6.1835E-02	5.0000E-03
	3	3.4785E+02	1.5060E+00	6	9.9886E-04	3.6000E-02
1242	1	3.4777E+02	1.5060E+00	4	3.2850E-03	9.8000E-02
	2	3.4783E+02	1.5060E+00	5	3.8434E-02	3.4000E-02
	3	3.4785E+02	1.5060E+00	6	8.0770E-04	3.6000E-02
1243	1	3.4776E+02	1.5060E+00	4	2.9709E-03	1.1600E-01
	2	3.4783E+02	1.5060E+00	5	8.0703E-02	1.6000E-02
	3	3.4785E+02	1.5060E+00	6	7.3580E-04	1.1700E-01

1250	1	3.4773E+02	1.5060E+00	4	7.2769E-03	5.9000E-02
	2	3.4783E+02	1.5060E+00	5	1.6647E-01	1.0000E-03
	3	3.4785E+02	1.5060E+00	6	9.7642E-04	4.0000E-02
1260	1	3.4767E+02	1.5060E+00	4	1.1886E-02	5.9000E-02
	2	3.4783E+02	1.5060E+00	5	2.1881E-01	1.0000E-03
	3	3.4785E+02	1.5060E+00	6	1.4371E-03	4.0000E-02
1265	1	3.4760E+02	1.5060E+00	4	1.1886E-02	5.9000E-02
	2	3.4783E+02	1.5060E+00	5	2.1881E-01	1.0000E-03
	3	3.4785E+02	1.5060E+00	6	1.4371E-03	4.0000E-02
1280	1	3.4767E+02	1.5060E+00	4	1.7413E-02	4.3000E-02
	2	3.4783E+02	1.5060E+00	5	2.2005E-01	1.0000E-03
	3	3.4785E+02	1.5060E+00	6	1.6648E-03	4.0000E-02
1290	1	3.4767E+02	1.5060E+00	4	2.3263E-02	4.3000E-02
	2	3.4783E+02	1.5060E+00	5	2.2162E-01	1.0000E-03
	3	3.4785E+02	1.5060E+00	6	1.8856E-03	4.0000E-02
1300	1	3.4761E+02	1.5060E+00	4	8.9741E-02	5.0000E-03
	2	3.4783E+02	1.5060E+00	5	2.3555E-01	1.0000E-03
	3	3.4785E+02	1.5060E+00	6	1.2563E-02	5.0000E-03
1310	1	3.4757E+02	1.5060E+00	4	9.0136E-02	5.0000E-03
	2	3.4783E+02	1.5060E+00	5	2.3592E-01	1.0000E-03
	3	3.4785E+02	1.5060E+00	6	1.2563E-02	5.0000E-03
1320	1	3.4767E+02	1.5060E+00	4	1.1837E-02	5.9000E-02
	2	3.4783E+02	1.5060E+00	5	2.2006E-01	1.0000E-03
	3	3.4785E+02	1.5060E+00	6	1.4858E-03	4.7000E-02
1330	1	3.4767E+02	1.5060E+00	4	1.9800E-02	5.0000E-03
	2	3.4783E+02	1.5060E+00	5	2.2165E-01	1.0000E-03
	3	3.4785E+02	1.5060E+00	6	1.4006E-03	4.7000E-02
1340	1	3.4761E+02	1.5060E+00	4	1.0093E-01	5.0000E-03
	2	3.4783E+02	1.5060E+00	5	2.3571E-01	1.0000E-03
	3	3.4785E+02	1.5060E+00	6	1.2877E-02	5.0000E-03
1350	1	3.4757E+02	1.5060E+00	4	1.0138E-01	5.0000E-03
	2	3.4783E+02	1.5060E+00	5	2.3603E-01	1.0000E-03
	3	3.4785E+02	1.5060E+00	6	1.2877E-02	5.0000E-03
4000	1	3.4781E+02	1.5060E+00	4	4.0126E-03	5.3000E-02
	2	3.4783E+02	1.5060E+00	5	8.6402E-02	1.0000E-02
	3	3.4794E+02	1.5060E+00	6	1.1170E-03	9.4000E-02
4010	1	3.4780E+02	1.5060E+00	4	4.6189E-03	5.4000E-02
	2	3.4783E+02	1.5060E+00	5	9.4723E-02	1.0000E-02
	3	3.4794E+02	1.5060E+00	6	1.1170E-03	9.4000E-02
4020	1	3.4777E+02	1.5060E+00	4	6.3793E-03	5.4000E-02
	2	3.4783E+02	1.5060E+00	5	1.1889E-01	1.0000E-02
	3	3.4794E+02	1.5060E+00	6	1.1170E-03	9.4000E-02
4030	1	3.4776E+02	1.5060E+00	4	6.4404E-03	5.4000E-02
	2	3.4783E+02	1.5060E+00	5	1.1974E-01	1.0000E-02
	3	3.4794E+02	1.5060E+00	6	1.1170E-03	9.4000E-02

STRESS COMPONENT MAXIMA
ELEMENT TYPE NUMBER = 1

ELEMENT NUMBER	LOCATION	FORCE COMPONENT	MAXIMUM VALUE	TIME AT MAXIMUM
1		FOR. MOM.	6.8637E+04 0.0000E+00	1.5130E+00 0.0000E+00
2		FOR. MOM.	4.0848E+04 0.0000E+00	1.5150E+00 0.0000E+00
3		FOR. MOM.	2.0668E+04 0.0000E+00	1.2900E-01 0.0000E+00
4		FOR. MOM.	0.0000E+00 3.6631E+06	0.0000E+00 1.5180E+00
5		FOR. MOM.	0.0000E+00 6.1619E+06	0.0000E+00 1.5250E+00
6		FOR. MOM.	0.0000E+00 1.1544E+06	0.0000E+00 5.3600E-01
7		FOR. MOM.	2.5145E+04 0.0000E+00	2.0200E-01 0.0000E+00
8		FOR. MOM.	1.4086E+04 0.0000E+00	2.7000E-02 0.0000E+00
9		FOR. MOM.	7.0771E-02 0.0000E+00	2.0400E-01 0.0000E+00
10		FOR. MOM.	8.4486E+03 0.0000E+00	4.7000E-02 0.0000E+00
11		FOR. MOM.	7.6014E+03 0.0000E+00	8.4000E-02 0.0000E+00
12		FOR. MOM.	5.9373E+04 0.0000E+00	2.3800E-01 0.0000E+00
13		FOR. MOM.	3.1133E+04 0.0000E+00	4.3000E-02 0.0000E+00
14		FOR. MOM.	6.0267E+04 0.0000E+00	4.2000E-02 0.0000E+00
15		FOR. MOM.	6.3988E+05 0.0000E+00	2.4000E-02 0.0000E+00

16	FOR. MON.	6.7730E+02 0.0000E+00	5.3000E-02 0.0000E+00
17	FOR. MON.	1.3803E+05 0.0000E+00	1.0000E-02 0.0000E+00
18	FOR. MON.	0.0000E+00 6.3763E+04	0.0000E+00 1.4600E-01
19	FOR. MON.	0.0000E+00 1.2209E+06	0.0000E+00 4.3000E-02
20	FOR. MON.	0.0000E+00 5.4742E+04	0.0000E+00 1.7400E-01

STRESS COMPONENT MAXIMA

ELEMENT TYPE NUMBER = 4

ELEMENT NUMBER	LOCATION	FORCE COMPONENT	MAXIMUM VALUE	TIME AT MAXIMUM
1		FOR. MOM.	4.2145E+04 0.0000E+00	1.5190E+00 0.0000E+00
2		FOR. MOM.	1.4264E+05 0.0000E+00	1.5190E+00 0.0000E+00

STRESS COMPONENT MAXIMA

ELEMENT TYPE NUMBER = 2

ELEMENT NUMBER	LOCATION	FORCE COMPONENT	MAXIMUM VALUE	TIME AT MAXIMUM
1	END-I	FX	2.0668E+04	1.2900E-01
		FY	7.9791E+04	1.5130E+00
		FZ	1.0395E+04	4.5000E-02
		TX	1.1544E+06	5.3600E-01
		MY	8.9529E+05	1.3800E-01
		MZ	7.1578E+06	1.5160E+00
1	END-J	FX	2.4460E+04	3.1000E-02
		FY	7.8863E+04	1.5140E+00
		FZ	1.0395E+04	4.5000E-02
		TX	7.9460E+05	5.3600E-01
		MY	9.6306E+05	7.6100E-01
		MZ	4.1555E+06	1.5190E+00
1	END-J	FX	4.7215E+04	1.5110E+00
		FY	6.6083E+04	1.5160E+00
		FZ	1.0395E+04	4.5000E-02
		TX	4.3361E+05	5.3600E-01
		MY	8.7297E+05	5.3600E-01
		MZ	1.6136E+06	1.2600E-01
2	END-I	FX	3.9580E+04	1.5110E+00
		FY	4.9260E+04	1.5200E+00
		FZ	7.8124E+03	8.1600E-01
		TX	4.3363E+05	5.3600E-01
		MY	8.7318E+05	5.3600E-01
		MZ	1.6137E+06	1.2600E-01
2	END-J	FX	5.4990E+04	1.5130E+00
		FY	3.3246E+04	1.3000E-01
		FZ	7.8124E+03	8.1600E-01
		TX	1.7769E+05	1.2000E-01
		MY	7.1005E+05	5.3600E-01
		MZ	7.9761E+05	5.8000E-02
2	END-J	FX	6.2198E+04	1.5140E+00
		FY	1.6190E+04	1.2800E-01
		FZ	7.8124E+03	8.1600E-01
		TX	1.1003E+05	5.3700E-01
		MY	4.8621E+05	1.5100E-01
		MZ	9.5002E+05	1.5340E+00
3	END-I	FX	5.1280E+04	1.5150E+00
		FY	6.7198E+03	8.1600E-01
		FZ	1.7998E+04	1.2700E-01
		TX	1.1002E+05	5.3700E-01
		MY	9.5014E+05	1.5340E+00
		MZ	4.8593E+05	1.5100E-01

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3	END-J	FX	5.1280E+04	1.5150E+00
		FY	6.7198E+03	8.1600E-01
		FZ	1.2098E+04	1.2700E-01
		TX	1.1002E+05	5.3700E-01
		MY	1.0529E+06	1.3200E-01
		MZ	5.0008E+05	1.1800E-01
4	END-I	FX	4.7902E+04	1.5150E+00
		FY	6.3327E+03	8.1700E-01
		FZ	1.1402E+04	1.2400E-01
		TX	1.1005E+05	5.3700E-01
		MY	1.0529E+06	1.3200E-01
		MZ	5.0008E+05	1.1800E-01
4	END-J	FX	4.7902E+04	1.5150E+00
		FY	6.3327E+03	8.1700E-01
		FZ	1.1402E+04	1.2400E-01
		TX	1.1005E+05	5.3700E-01
		MY	1.1809E+06	1.3100E-01
		MZ	5.1129E+05	1.1800E-01
5	END-I	FX	3.8760E+04	1.5160E+00
		FY	5.5200E+03	5.3700E-01
		FZ	1.1094E+04	1.2300E-01
		TX	1.1004E+05	5.3700E-01
		MY	1.1809E+06	1.3100E-01
		MZ	5.1129E+05	1.1800E-01
5	END-J	FX	3.8760E+04	1.5160E+00
		FY	5.5200E+03	5.3700E-01
		FZ	1.1094E+04	1.2300E-01
		TX	1.1004E+05	5.3700E-01
		MY	1.5390E+06	1.2900E-01
		MZ	4.2641E+05	1.1900E-01
6	END-I	FX	2.2840E+04	1.3000E-01
		FY	1.5762E+04	4.3000E-02
		FZ	5.4663E+03	6.7000E-02
		TX	1.1001E+05	5.3700E-01
		MY	4.2637E+05	1.1900E-01
		MZ	1.5390E+06	1.2900E-01
6	END-J	FX	2.4003E+04	1.5170E+00
		FY	1.3674E+04	4.3000E-02
		FZ	5.4663E+03	6.7000E-02
		TX	1.2622E+05	6.6000E-02
		MY	2.5516E+05	5.0000E-02
		MZ	1.5984E+06	1.2500E-01
6	END-J	FX	2.3670E+04	1.5020E+00
		FY	1.2181E+04	1.3200E-01
		FZ	5.4663E+03	6.7000E-02
		TX	1.5031E+05	4.9000E-02

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		MY	3.3460E+05	5.3700E-01
		MZ	1.5019E+06	1.2300E-01
7	END-I	FX	2.3803E+04	3.6000E-02
		FY	1.2404E+04	2.3000E-02
		FZ	7.2042E+03	1.2000E-01
		TX	1.5032E+05	4.9000E-02
		MY	3.3451E+05	5.3700E-01
		MZ	1.5019E+06	1.2300E-01
7	END-J	FX	2.0833E+04	3.6000E-02
		FY	1.5844E+04	2.2000E-02
		FZ	7.2042E+03	1.2000E-01
		TX	1.6540E+05	7.6100E-01
		MY	3.5934E+05	1.1800E-01
		MZ	1.2842E+06	1.4730E+00
7	END-J	FX	1.4692E+04	3.6000E-02
		FY	1.8971E+04	3.6000E-02
		FZ	7.2042E+03	1.2000E-01
		TX	2.3676E+05	5.3700E-01
		MY	6.1455E+05	1.1900E-01
		MZ	1.0783E+06	1.1700E-01
8	END-I	FX	2.0147E+04	3.7000E-02
		FY	8.9061E+03	4.4000E-02
		FZ	1.2019E+04	1.2200E-01
		TX	2.3682E+05	5.3700E-01
		MY	1.0855E+06	9.9000E-02
		MZ	1.0817E+06	1.1800E-01
8	END-J	FX	2.0147E+04	3.7000E-02
		FY	8.9061E+03	4.4000E-02
		FZ	1.2019E+04	1.2200E-01
		TX	2.3682E+05	5.3700E-01
		MY	1.3911E+06	2.1000E-02
		MZ	8.6965E+05	1.1800E-01
9	END-I	FX	2.9008E+04	1.5260E+00
		FY	7.4594E+03	1.1800E-01
		FZ	1.2511E+04	1.6000E-02
		TX	2.3682E+05	5.3700E-01
		MY	1.3311E+06	2.1000E-02
		MZ	8.6965E+05	1.1800E-01
9	END-J	FX	2.9008E+04	1.5260E+00
		FY	7.4594E+03	1.1800E-01
		FZ	1.2511E+04	1.6000E-02
		TX	2.3682E+05	5.3700E-01
		MY	1.4353E+06	1.8000E-02
		MZ	8.9616E+05	4.5000E-02
10	END-I	FX	4.3645E+04	1.5240E+00

		FY	9.1109E+03	3.6000E-02
		FZ	1.0189E+04	1.3100E-01
		TX	2.3682E+05	5.3700E-01
		MY	1.4353E+06	1.8000E-02
		MZ	8.9616E+05	4.5000E-02
10	END-J	FX	4.3645E+04	1.5240E+00
		FY	9.1109E+03	3.6000E-02
		FZ	1.0189E+04	1.3100E-01
		TX	2.3682E+05	5.3700E-01
		MY	1.6137E+06	1.5180E+00
		MZ	1.2523E+06	5.3700E-01
11	END-I	FX	5.8047E+04	1.5230E+00
		FY	8.6760E+03	2.0000E-02
		FZ	3.5439E+04	1.5190E+00
		TX	2.3682E+05	5.3700E-01
		MY	1.6137E+06	1.5180E+00
		MZ	1.2523E+06	5.3700E-01
11	END-J	FX	5.8047E+04	1.5230E+00
		FY	8.6760E+03	2.0000E-02
		FZ	3.5439E+04	1.5190E+00
		TX	2.3682E+05	5.3700E-01
		MY	1.6456E+06	1.3000E-02
		MZ	8.1066E+05	5.3800E-01
12	END-I	FX	7.2650E+04	1.5220E+00
		FY	5.8780E+03	5.3800E-01
		FZ	3.1874E+04	1.5200E+00
		TX	2.3682E+05	5.3700E-01
		MY	1.6456E+06	1.3000E-02
		MZ	8.1066E+05	5.3800E-01
12	END-J	FX	7.2650E+04	1.5220E+00
		FY	5.8780E+03	5.3800E-01
		FZ	3.1874E+04	1.5200E+00
		TX	2.3682E+05	5.3700E-01
		MY	3.2397E+06	1.5200E+00
		MZ	5.6578E+05	7.3000E-02
13	END-I	FX	8.7448E+04	1.5210E+00
		FY	9.7244E+03	7.3000E-02
		FZ	2.8221E+04	1.5070E+00
		TX	2.3682E+05	5.3700E-01
		MY	3.2397E+06	1.5200E+00
		MZ	5.6578E+05	7.3000E-02
13	END-J	FX	8.7448E+04	1.5210E+00
		FY	9.7244E+03	7.3000E-02
		FZ	2.8221E+04	1.5070E+00
		TX	2.3682E+05	5.3700E-01
		MY	5.1369E+06	1.5200E+00
		MZ	3.3948E+05	3.7000E-02

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14	END-I	FX	9.6382E+04	1.5210E+00
		FY	4.7381E+03	3.6000E-02
		FZ	2.6923E+04	1.5050E+00
		TX	2.3682E+05	5.3700E-01
		MY	5.1369E+06	1.5200E+00
		MZ	3.3948E+05	3.7000E-02
14	END-J	FX	9.6382E+04	1.5210E+00
		FY	4.7381E+03	3.6000E-02
		FZ	2.6923E+04	1.5050E+00
		TX	2.3682E+05	5.3700E-01
		MY	5.4684E+06	1.5200E+00
		MZ	2.7516E+05	3.7000E-02
15	END-I	FX	1.0568E+05	1.5200E+00
		FY	2.8755E+04	2.5000E-02
		FZ	4.3907E+03	3.6000E-02
		TX	2.3682E+05	5.3700E-01
		MY	2.7516E+05	3.7000E-02
		MZ	5.4684E+06	1.5200E+00
15	END-J	FX	1.0529E+05	1.5200E+00
		FY	2.8092E+04	2.5000E-02
		FZ	4.3907E+03	3.6000E-02
		TX	2.0628E+05	5.3600E-01
		MY	1.4856E+05	1.4900E-01
		MZ	5.4332E+06	1.5190E+00
15	END-J	FX	8.9718E+04	1.5080E+00
		FY	6.0622E+04	1.5210E+00
		FZ	4.3907E+03	3.6000E-02
		TX	1.5463E+05	1.5900E-01
		MY	1.8096E+05	5.3800E-01
		MZ	4.0015E+06	1.5070E+00
16	END-I	FX	1.0092E+05	1.4660E+00
		FY	7.1120E+04	1.5200E+00
		FZ	2.8777E+03	4.1000E-02
		TX	1.5464E+05	1.5900E-01
		MY	1.8095E+05	5.3800E-01
		MZ	4.0015E+06	1.5070E+00
16	END-J	FX	7.3360E+04	1.4640E+00
		FY	1.0304E+05	1.5200E+00
		FZ	2.8777E+03	4.1000E-02
		TX	9.7445E+04	1.6000E-01
		MY	2.1081E+05	5.3600E-01
		MZ	1.4453E+06	1.4500E-01
16	END-J	FX	5.8070E+04	6.0000E-03
		FY	1.1929E+05	1.5190E+00
		FZ	2.8777E+03	4.1000E-02
		TX	3.6996E+04	1.2300E-01
		MY	2.5789E+05	1.6000E-01

17	END-I	MZ	3.9511E+06	2.0000E-01
		FX	0.5590E+04	6.0000E-03
		FY	2.9139E+03	5.9000E-02
		FZ	1.2311E+05	1.5180E+00
		TX	3.6993E+04	1.2300E-01
		MY	3.9511E+06	2.0000E-01
		MZ	2.5789E+05	1.6000E-01
17	END-J	FX	0.5590E+04	6.0000E-03
		FY	2.9139E+03	5.9000E-02
		FZ	1.2311E+05	1.5180E+00
		TX	3.6993E+04	1.2300E-01
		MY	6.6675E+06	1.5200E+00
		MZ	2.7528E+05	5.9000E-02
18	END-I	FX	9.5239E+04	6.0000E-03
		FY	2.6837E+03	5.9000E-02
		FZ	3.0418E+04	2.0200E-01
		TX	3.6993E+04	1.2300E-01
		MY	6.6675E+06	1.5200E+00
		MZ	2.7528E+05	5.9000E-02
18	END-J	FX	9.5239E+04	6.0000E-03
		FY	2.6837E+03	5.9000E-02
		FZ	3.0418E+04	2.0200E-01
		TX	3.6993E+04	1.2300E-01
		MY	6.426E+06	1.5200E+00
		MZ	3.0748E+05	5.9000E-02
19	END-I	FX	1.1817E+05	5.0000E-03
		FY	3.1175E+03	4.6000E-02
		FZ	2.7838E+04	2.0100E-01
		TX	3.6993E+04	1.2300E-01
		MY	6.426E+06	1.5200E+00
		MZ	3.0748E+05	5.9000E-02
19	END-J	FX	1.1817E+05	5.0000E-03
		FY	3.1175E+03	4.6000E-02
		FZ	2.7838E+04	2.0100E-01
		TX	3.6993E+04	1.2300E-01
		MY	5.2446E+06	1.5210E+00
		MZ	4.3613E+05	5.9000E-02
20	END-I	FX	1.5234E+05	5.0000E-03
		FY	2.1391E+03	4.1000E-02
		FZ	2.6876E+04	1.9800E-01
		TX	3.6993E+04	1.2300E-01
		MY	5.2446E+06	1.5210E+00
		MZ	4.3613E+05	5.9000E-02
20	END-J	FX	1.5234E+05	5.0000E-03
		FY	2.1391E+03	4.1000E-02
		FZ	2.6876E+04	1.9800E-01

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		TX	3.6993E+04	1.2300E-01
		MY	4.4636E+06	1.3300E-01
		MZ	3.8989E+05	4.6000E-02
21	END-I	FX	1.7968E+05	5.0000E-03
		FY	4.1503E+03	5.9000E-02
		FZ	2.5551E+04	1.9700E-01
		TX	3.6993E+04	1.2300E-01
		MY	4.4636E+06	1.3300E-01
		MZ	3.6989E+05	4.6000E-02
21	END-J	FX	1.7968E+05	5.0000E-03
		FY	4.1503E+03	5.9000E-02
		FZ	2.5551E+04	1.9700E-01
		TX	3.6993E+04	1.2300E-01
		MY	3.8806E+06	1.4300E-01
		MZ	2.3756E+05	4.7000E-02
22	END-I	FX	1.9878E+05	5.0000E-03
		FY	6.2306E+03	4.6000E-02
		FZ	1.8462E+04	1.9800E-01
		TX	3.6993E+04	1.2300E-01
		MY	3.8806E+06	1.4300E-01
		MZ	2.3756E+05	4.7000E-02
22	END-J	FX	1.9878E+05	5.0000E-03
		FY	6.2306E+03	4.6000E-02
		FZ	1.8462E+04	1.9800E-01
		TX	3.6993E+04	1.2300E-01
		MY	3.7386E+06	2.3800E-01
		MZ	3.0215E+05	5.8000E-02
23	END-I	FX	2.0712E+05	5.0000E-03
		FY	3.7083E+03	9.9000E-02
		FZ	1.3867E+04	1.5270E+00
		TX	3.6993E+04	1.2300E-01
		MY	3.7386E+06	2.3800E-01
		MZ	3.0215E+05	5.8000E-02
23	END-J	FX	2.0712E+05	5.0000E-03
		FY	3.7083E+03	9.9000E-02
		FZ	1.3867E+04	1.5270E+00
		TX	3.6993E+04	1.2300E-01
		MY	3.5179E+06	2.3900E-01
		MZ	2.2365E+05	5.9000E-02
24	END-I	FX	2.0956E+05	5.0000E-03
		FY	2.6804E+03	1.0000E-01
		FZ	1.4631E+04	1.4720E+00
		TX	3.6993E+04	1.2300E-01
		MY	3.5179E+06	2.3900E-01
		MZ	2.2365E+05	5.9000E-02
24	END-J	FX	2.0956E+05	5.0000E-03

		FY	2.6804E+03	1.0000E-01
		FZ	1.4631E+04	1.4720E+00
		TX	3.6993E+04	1.2300E-01
		MY	2.8950E+06	2.3900E-01
		MZ	1.5208E+05	1.3000E-01
25	END-I	FY	2.2794E+05	2.1000E-02
		FZ	2.0462E+03	5.9000E-02
		TX	2.1318E+04	1.4000E-01
		MY	3.6993E+04	1.2300E-01
		MZ	2.8950E+06	2.3900E-01
		MZ	1.5208E+05	1.3000E-01
25	END-J	FY	2.2794E+05	2.1000E-02
		FZ	2.0462E+03	5.9000E-02
		TX	2.1318E+04	1.4000E-01
		MY	3.6993E+04	1.2300E-01
		MZ	1.5292E+06	2.4000E-01
		MZ	2.0136E+05	1.3200E-01
26	END-I	FY	2.6115E+05	2.1000E-02
		FZ	1.2055E+03	1.2900E-01
		TX	3.2022E+04	2.3900E-01
		MY	3.6993E+04	1.2300E-01
		MZ	1.5292E+06	2.4000E-01
		MZ	2.0136E+05	1.3200E-01
26	END-J	FY	2.6115E+05	2.1000E-02
		FZ	1.2055E+03	1.2900E-01
		TX	3.2022E+04	2.3900E-01
		MY	3.6993E+04	1.2300E-01
		MZ	1.0207E+06	1.1800E-01
		MZ	1.7718E+05	8.7000E-02
27	END-I	FY	3.0256E+05	2.1000E-02
		FZ	3.1864E+03	1.3200E-01
		TX	4.0352E+04	2.3900E-01
		MY	3.6993E+04	1.2300E-01
		MZ	1.0207E+06	1.1800E-01
		MZ	1.7718E+05	8.7000E-02
27	END-J	FY	3.0256E+05	2.1000E-02
		FZ	3.1864E+03	1.3200E-01
		TX	4.0352E+04	2.3900E-01
		MY	3.6993E+04	1.2300E-01
		MZ	2.1017E+06	1.4000E-01
		MZ	4.3953E+04	8.9000E-02
28	END-I	FY	3.4650E+05	2.0000E-02
		FZ	4.4731E+03	8.6000E-02
		TX	4.1365E+04	2.3900E-01
		MY	3.6993E+04	1.2300E-01
		MZ	2.1017E+06	1.4000E-01
		MZ	4.3953E+04	8.9000E-02

28	END-J	FX FY FZ TX MY MZ	3.4650E+05 4.4731E+03 4.1365E+04 3.6993E+04 3.6021E+06 1.8003E+05	2.0000E-02 8.6000E-02 2.3900E-01 1.2300E-01 2.3900E-01 1.1600E-01
29	END-I	FX FY FZ TX MY MZ	4.0709E+05 1.9980E+03 2.8140E+04 3.6993E+04 3.6021E+06 1.8003E+05	1.9000E-02 9.9000E-02 2.3800E-01 1.2300E-01 2.3900E-01 1.1600E-01
29	END-J	FX FY FZ TX MY MZ	4.0709E+05 1.9980E+03 1.8140E+04 3.6993E+04 3.4029E+06 1.6490E+05	1.9000E-02 9.9000E-02 2.3800E-01 1.2300E-01 2.3900E-01 1.1600E-01
30	END-I	FX FY FZ TX MY MZ	4.1848E+05 1.7546E+03 1.8214E+04 3.6993E+04 3.4029E+06 1.6490E+05	1.9000E-02 9.9000E-02 1.4500E-01 1.2300E-01 2.3900E-01 1.1600E-01
30	END-J	FX FY FZ TX MY MZ	4.1848E+05 1.7546E+03 1.8214E+04 3.6993E+04 3.0429E+06 1.3852E+05	1.9000E-02 9.9000E-02 1.4500E-01 1.2300E-01 2.3900E-01 1.1600E-01
31	END-I	FX FY FZ TX MY MZ	4.2528E+05 1.5964E+03 1.8329E+04 3.6993E+04 3.0429E+06 1.3852E+05	1.9000E-02 9.9000E-02 1.4500E-01 1.2300E-01 2.3900E-01 1.1600E-01
31	END-J	FX FY FZ TX MY MZ	4.2528E+05 1.5964E+03 1.8329E+04 3.6993E+04 2.8839E+06 1.2702E+05	1.9000E-02 9.9000E-02 1.4500E-01 1.2300E-01 2.3900E-01 1.1700E-01
32	END-I	FX FY FZ TX MY	4.2947E+05 1.4959E+03 1.8314E+04 3.6993E+04 2.8839E+06	1.9000E-02 9.9000E-02 1.4500E-01 1.2300E-01 2.3900E-01

		MZ	1.2702E+05	1.1700E-01
32	END-J	FX	4.2947E+05	1.9000E-02
		FY	1.4959E+03	9.9000E-02
		FZ	1.8314E+04	1.4500E-01
		TX	3.6993E+04	1.2300E-01
		MY	2.7275E+06	2.3900E-01
		MZ	1.1610E+05	1.1700E-01
33	END-I	FX	4.3364E+05	1.9000E-02
		FY	1.3938E+03	9.9000E-02
		FZ	1.8239E+04	1.4400E-01
		TX	3.6993E+04	1.2300E-01
		MY	2.7275E+06	2.3900E-01
		MZ	1.1610E+05	1.1700E-01
33	END-J	FX	4.3364E+05	1.9000E-02
		FY	1.3938E+03	9.9000E-02
		FZ	1.8239E+04	1.4400E-01
		TX	3.6993E+04	1.2300E-01
		MY	2.5744E+06	2.3900E-01
		MZ	1.0493E+05	1.1700E-01
34	END-I	FX	4.3777E+05	1.9000E-02
		FY	1.3111E+03	1.1600E-01
		FZ	1.8079E+04	1.4400E-01
		TX	3.6993E+04	1.2300E-01
		MY	2.5744E+06	2.3900E-01
		MZ	1.0493E+05	1.1700E-01
34	END-J	FX	4.3777E+05	1.9000E-02
		FY	1.3111E+03	1.1600E-01
		FZ	1.8079E+04	1.4400E-01
		TX	3.6993E+04	1.2300E-01
		MY	2.4255E+06	2.3900E-01
		MZ	9.3502E+04	1.1700E-01
35	END-I	FX	4.4989E+05	1.8000E-02
		FY	1.3475E+03	1.1700E-01
		FZ	1.7367E+04	1.4400E-01
		TX	3.6993E+04	1.2300E-01
		MY	2.4255E+06	2.3900E-01
		MZ	9.3502E+04	1.1700E-01
35	END-J	FX	4.4989E+05	1.8000E-02
		FY	1.3475E+03	1.1700E-01
		FZ	1.7367E+04	1.4400E-01
		TX	3.6993E+04	1.2300E-01
		MY	1.9148E+06	2.8300E-01
		MZ	5.6892E+04	8.7000E-02
36	END-I	FX	4.5632E+05	1.8000E-02
		FY	1.3141E+03	1.1700E-01
		FZ	3.6617E+04	1.5500E-01

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		TX	3.6993E+04	1.2300E-01
		MY	1.9148E+06	2.8300E-01
		MZ	5.6892E+04	8.7000E-02
36	END-J	FX	4.6632E+05	1.8000E-02
		FY	1.3141E+03	1.1700E-01
		FZ	3.6617E+04	1.5500E-01
		TX	3.6993E+04	1.2300E-01
		MY	1.9996E+06	2.8100E-01
		MZ	4.9110E+04	6.9000E-02
37	END-I	FX	4.7816E+05	1.8000E-02
		FY	1.1218E+03	1.1700E-01
		FZ	2.6310E+04	6.2000E-02
		TX	3.6359E+04	1.2700E-01
		MY	1.6580E+06	2.8400E-01
		MZ	4.7689E+04	6.9000E-02
37	END-J	FX	4.7816E+05	1.8000E-02
		FY	1.1218E+03	1.1700E-01
		FZ	2.6310E+04	6.2000E-02
		TX	3.6359E+04	1.2700E-01
		MY	1.1095E+06	2.8000E-01
		MZ	5.4818E+04	4.3700E-01
38	END-I	FX	4.9564E+05	1.8000E-02
		FY	7.1364E+02	1.4700E-01
		FZ	3.1950E+04	1.5000E-02
		TX	3.3159E+04	1.3900E-01
		MY	1.1977E+06	1.4800E-01
		MZ	5.4801E+04	4.3700E-01
38	END-J	FX	4.9564E+05	1.8000E-02
		FY	7.1364E+02	1.4700E-01
		FZ	3.1950E+04	1.5000E-02
		TX	3.3159E+04	1.3900E-01
		MY	1.2285E+06	6.2000E-02
		MZ	6.0372E+04	4.3800E-01
39	END-I	FX	5.0848E+05	1.8000E-02
		FY	5.8761E+02	6.9000E-02
		FZ	3.5078E+04	4.2000E-02
		TX	3.3400E+04	1.4300E-01
		MY	1.4499E+06	3.2000E-02
		MZ	6.0373E+04	4.3800E-01
39	END-J	FX	5.0848E+05	1.8000E-02
		FY	5.8761E+02	6.9000E-02
		FZ	3.5078E+04	4.2000E-02
		TX	3.3400E+04	1.4300E-01
		MY	1.1511E+06	2.3000E-02
		MZ	6.5023E+04	1.1700E-01
40	END-I	FX	5.2586E+05	1.8000E-02

		FY	7.9174E+02	6.9000E-02
		FZ	2.9435E+04	6.2000E-02
		TX	3.3400E+04	1.4300E-01
		MY	1.1511E+06	2.3000E-02
		MZ	6.5023E+04	1.1700E-01
40	END-J	FX	5.2586E+05	1.8000E-02
		FY	7.9174E+02	6.9000E-02
		FZ	2.9435E+04	6.2000E-02
		TX	3.3400E+04	1.4300E-01
		MY	9.9855E+05	5.0000E-03
		MZ	5.9412E+04	1.6300E-01
41	END-I	FX	5.5074E+05	1.7000E-02
		FY	6.8840E+02	5.9000E-02
		FZ	3.9807E+04	2.4000E-02
		TX	3.3400E+04	1.4300E-01
		MY	9.9855E+05	5.0000E-03
		MZ	5.9412E+04	1.6300E-01
41	END-J	FX	5.5074E+05	1.7000E-02
		FY	6.8840E+02	5.9000E-02
		FZ	3.9807E+04	2.4000E-02
		TX	3.3400E+04	1.4300E-01
		MY	2.9750E+06	6.1000E-02
		MZ	5.0625E+04	9.8000E-02
42	END-I	FX	5.6677E+05	1.7000E-02
		FY	6.4472E+02	1.1600E-01
		FZ	4.6191E+04	2.5000E-02
		TX	3.3400E+04	1.4300E-01
		MY	2.9750E+06	6.1000E-02
		MZ	5.0625E+04	9.8000E-02
42	END-J	FX	5.6677E+05	1.7000E-02
		FY	6.4472E+02	1.1600E-01
		FZ	4.6191E+04	2.5000E-02
		TX	3.3400E+04	1.4300E-01
		MY	3.7835E+06	6.1000E-02
		MZ	4.6998E+04	6.9000E-02
43	END-I	FX	5.7810E+05	1.7000E-02
		FY	8.1062E+02	1.1400E-01
		FZ	4.9793E+04	2.5000E-02
		TX	3.5253E+04	1.4300E-01
		MY	3.9073E+06	6.1000E-02
		MZ	4.6998E+04	6.9000E-02
43	END-J	FX	5.7810E+05	1.7000E-02
		FY	8.1062E+02	1.1400E-01
		FZ	4.9793E+04	2.5000E-02
		TX	3.5253E+04	1.4300E-01
		MY	4.3058E+06	6.1000E-02
		MZ	4.3395E+04	6.9000E-02

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44	END-I	FX	5.8220E+05	1.7000E-02
		FY	9.2673E+02	9.8000E-02
		FZ	5.1101E+04	2.5000E-02
		TX	3.5253E+04	1.4300E-01
		MY	4.3058E+06	6.1000E-02
		MZ	4.3395E+04	6.9000E-02
44	END-J	FX	5.8220E+05	1.7000E-02
		FY	9.2673E+02	9.8000E-02
		FZ	5.1101E+04	2.5000E-02
		TX	3.5253E+04	1.4300E-01
		MY	4.8441E+06	6.1000E-02
		MZ	3.6843E+04	6.9000E-02
45	END-I	FX	5.8445E+05	1.7000E-02
		FY	9.8946E+02	9.8000E-02
		FZ	5.1692E+04	2.5000E-02
		TX	3.5253E+04	1.4300E-01
		MY	4.8441E+06	6.1000E-02
		MZ	3.6843E+04	6.9000E-02
45	END-J	FX	5.8445E+05	1.7000E-02
		FY	9.8946E+02	9.8000E-02
		FZ	5.1692E+04	2.5000E-02
		TX	3.5253E+04	1.4300E-01
		MY	6.2880E+06	6.1000E-02
		MZ	2.8494E+04	5.9000E-02
46	END-I	FX	1.1017E+05	1.0000E-02
		FY	4.7743E+02	1.4800E-01
		FZ	1.8285E+05	2.4000E-02
		TX	7.6381E-09	2.0000E-02
		MY	1.3165E+07	2.4000E-02
		MZ	3.4375E+04	1.4800E-01
46	END-J	FX	1.1017E+05	1.0000E-02
		FY	4.7743E+02	1.4800E-01
		FZ	1.8285E+05	2.4000E-02
		TX	7.6381E-09	2.0000E-02
		MY	3.9632E-08	4.6000E-02
		MZ	9.7886E-09	5.2000E-02
47	END-I	FX	6.2837E+05	2.3000E-02
		FY	5.8167E+02	4.8800E-01
		FZ	1.2977E+05	9.0000E-03
		TX	6.3763E+04	1.4600E-01
		MY	9.0085E+06	1.0000E-02
		MZ	2.8494E+04	5.9000E-02
47	END-J	FX	6.2837E+05	2.3000E-02
		FY	5.8167E+02	4.8800E-01
		FZ	1.2977E+05	9.0000E-03
		TX	6.3763E+04	1.4600E-01
		MY	4.8658E+06	1.0000E-02
		MZ	3.4840E+04	1.6300E-01

48	END-I	FX	6.3132E+05	2.4000E-02
		FY	5.9437E+02	4.8800E-01
		FZ	1.3227E+05	9.0000E-03
		TX	6.3763E+04	1.4600E-01
		MY	4.8698E+06	1.0000E-02
		MZ	3.4840E+04	1.6300E-01
48	END-J	FX	6.3132E+05	2.4000E-02
		FY	5.9437E+02	4.8800E-01
		FZ	1.3227E+05	9.0000E-03
		TX	6.3763E+04	1.4600E-01
		MY	2.4628E+06	2.4000E-02
		MZ	4.3826E+04	1.6300E-01
49	END-I	FX	6.3710E+05	2.4000E-02
		FY	6.6020E+02	5.3000E-02
		FZ	1.3652E+05	1.0000E-02
		TX	6.3763E+04	1.4600E-01
		MY	2.4628E+06	2.4000E-02
		MZ	4.3826E+04	1.6300E-01
49	END-J	FX	6.3710E+05	2.4000E-02
		FY	6.6020E+02	5.3000E-02
		FZ	1.3652E+05	1.0000E-02
		TX	6.3763E+04	1.4600E-01
		MY	1.2209E+06	4.3000E-02
		MZ	5.4742E+04	1.6400E-01
50	END-I	FX	2.9756E+04	5.0000E-03
		FY	2.4807E+02	8.2600E-01
		FZ	1.6805E+04	3.6000E-02
		TX	1.6022E+03	5.9000E-02
		MY	9.8406E+05	3.6000E-02
		MZ	1.3712E+04	8.2600E-01
50	END-J	FX	2.9756E+04	5.0000E-03
		FY	2.4807E+02	8.2600E-01
		FZ	1.6806E+04	3.6000E-02
		TX	1.6022E+03	5.9000E-02
		MY	7.1828E+05	3.5000E-02
		MZ	9.7437E+03	8.2600E-01
51	END-I	FX	2.9701E+04	5.0000E-03
		FY	2.4759E+02	8.2600E-01
		FZ	1.6718E+04	3.6000E-02
		TX	1.6022E+03	5.9000E-02
		MY	7.1828E+05	3.5000E-02
		MZ	9.7437E+03	8.2600E-01
51	END-J	FX	2.9701E+04	5.0000E-03
		FY	2.4759E+02	8.2600E-01
		FZ	1.6718E+04	3.6000E-02
		TX	1.6022E+03	5.9000E-02

		MY	6.6868E+05	3.5000E-02
		MZ	9.2683E+03	5.4800E-01
52	END-I	FX	2.9532E+04	5.0000E-03
		FY	2.4603E+02	8.2600E-01
		FZ	1.6454E+04	3.6000E-02
		TX	1.6022E+03	5.9000E-02
		MY	6.6868E+05	3.5000E-02
		MZ	9.2683E+03	5.4800E-01
52	END-J	FX	2.9532E+04	5.0000E-03
		FY	2.4603E+02	8.2600E-01
		FZ	1.6454E+04	3.6000E-02
		TX	1.6022E+03	5.9000E-02
		MY	5.7209E+05	6.0000E-02
		MZ	8.3648E+03	5.4800E-01
53	END-I	FX	2.9278E+04	5.0000E-03
		FY	2.4346E+02	8.2600E-01
		FZ	1.6091E+04	3.6000E-02
		TX	1.6022E+03	5.9000E-02
		MY	5.7209E+05	6.0000E-02
		MZ	8.3648E+03	5.4800E-01
53	END-J	FX	2.9278E+04	5.0000E-03
		FY	2.4346E+02	8.2600E-01
		FZ	1.6091E+04	3.6000E-02
		TX	1.6022E+03	5.9000E-02
		MY	4.8942E+05	6.0000E-02
		MZ	7.3572E+03	5.4800E-01
54	END-I	FX	2.8016E+04	5.0000E-03
		FY	2.2974E+02	8.2600E-01
		FZ	1.4586E+04	3.5000E-02
		TX	1.6022E+03	5.9000E-02
		MY	4.8942E+05	6.0000E-02
		MZ	7.3572E+03	5.4800E-01
54	END-J	FX	2.8016E+04	5.0000E-03
		FY	2.2974E+02	8.2600E-01
		FZ	1.4586E+04	3.5000E-02
		TX	1.6022E+03	5.9000E-02
		MY	2.5324E+05	6.0000E-02
		MZ	5.3942E+03	4.3600E-02
55	END-I	FX	2.3783E+04	5.0000E-03
		FY	2.1241E+02	8.2600E-01
		FZ	1.3892E+04	6.0000E-02
		TX	1.9674E-08	1.3400E-01
		MY	2.3621E+05	6.0000E-02
		MZ	3.6118E+03	8.2600E-01
55	END-J	FX	2.3783E+04	5.0000E-03
		FY	2.1241E+02	8.2600E-01

FZ 1.3892E+04
TX 1.9674E-08
MY 5.3215E-06
MZ 2.3785E-07

56 END-I

FX 4.0464E+02
FY 2.0766E+03
FZ 1.2586E+03
TX 8.5753E+03
MY 2.1679E+04
MZ 5.1372E+04

56 END-J

FX 4.0464E+02
FY 2.0766E+03
FZ 1.2586E+03
TX 8.5753E+03
MY 2.1679E+04
MZ 5.1372E+04

57 END-I

FX 3.9E+2E+02
FY 1.4801E+03
FZ 7.3161E+02
TX 8.5753E+03
MY 8.2302E+03
MZ 2.9044E+04

57 END-J

FX 3.9872E+02
FY 1.4801E+03
FZ 7.3161E+02
TX 8.5753E+03
MY 8.2302E+03
MZ 2.9044E+04

58 END-I

FX 3.9382E+02
FY 9.9802E+02
FZ 4.5393E+02
TX 8.5753E+03
MY 6.8090E+03
MZ 2.2224E+04

58 END-J

FX 4.2723E+02
FY 9.8418E+02
FZ 4.5393E+02
TX 3.2433E+03
MY 6.0636E+03
MZ 9.9082E+03

58 END-J

FX 9.9802E+02
FY 3.9382E+02
FZ 4.5393E+02
TX 1.4541E-10
MY 1.7859E+03
MZ 1.3464E+03

6.0000E-02
1.3400E-01
2.0000E-02
1.4730E+00

5.0000E-03
5.0000E-03
3.7000E-02
6.0000E-02
3.7000E-02
5.0000E-03

5.0000E-03
5.0000E-03
3.7000E-02
6.0000E-02
6.2000E-02
5.0000E-03

5.0000E-03
5.0000E-03
3.7000E-02
6.0000E-02
6.2000E-02
5.0000E-03

5.0000E-03
5.0000E-03
3.7000E-02
6.0000E-02
6.0000E-02
5.0000E-03

5.0000E-03
5.0000E-03
6.0000E-02
6.0000E-02
6.0000E-02
5.0000E-03

5.0000E-03
5.0000E-03
6.0000E-02
6.0000E-02
6.0000E-02
5.0000E-03

5.0000E-03
5.0000E-03
6.0000E-02
2.1600E-01
5.9000E-02
5.0000E-03

59 END-I
 FX 2.2915E+02 5.0000E-03
 FY 1.3469E+02 5.0000E-03
 FZ 1.7866E+02 5.9000E-02
 TX 1.3719E-10 3.2000E-02
 MY 1.7859E+03 5.9000E-02
 MZ 1.3464E+03 5.0000E-03

55 END-J
 FX 2.2915E+02 5.0000E-03
 FY 1.3469E+02 5.0000E-03
 FZ 1.7866E+02 5.9000E-02
 TX 1.3719E-10 3.2000E-02
 MY 1.4196E-09 3.7000E-02
 MZ 3.2758E-10 1.5110E+00

60 END-I
 FX 2.4280E+02 5.0000E-03
 FY 2.1821E+03 5.0000E-03
 FZ 1.2257E+03 3.7000E-02
 TX 7.7188E+03 5.9000E-02
 MY 2.1511E+04 3.6000E-02
 MZ 5.4910E+04 5.0000E-03

60 END-J
 FX 2.4280E+02 5.0000E-03
 FY 2.1821E+03 5.0000E-03
 FZ 1.2257E+03 3.7000E-02
 TX 7.7188E+03 5.9000E-02
 MY 9.423E+03 6.0000E-02
 MZ 3.1376E+04 5.0000E-03

61 END-I
 FX 4.1567E+02 5.0000E-03
 FY 1.5540E+03 5.0000E-03
 FZ 7.1577E+02 3.6000E-02
 TX 8.4281E+03 5.9000E-02
 MY 8.7892E+03 6.0000E-02
 MZ 3.1376E+04 5.0000E-03

61 END-J
 FX 4.1567E+02 5.0000E-03
 FY 1.5540E+03 5.0000E-03
 FZ 7.1577E+02 3.6000E-02
 TX 8.4281E+03 5.9000E-02
 MY 7.3746E+03 5.9000E-02
 MZ 2.4215E+04 5.0000E-03

62 END-I
 FX 4.7710E+02 5.0000E-03
 FY 1.0391E+03 5.0000E-03
 FZ 4.6626E+02 5.9000E-02
 TX 8.8273E+03 5.9000E-02
 MY 5.8919E+03 5.9000E-02
 MZ 2.4215E+04 5.0000E-03

62 END-J
 FX 3.9821E+02 5.0000E-03
 FY 1.0718E+03 5.0000E-03
 FZ 4.6626E+02 5.9000E-02
 TX 3.4122E+03 5.9000E-02
 MY 6.1669E+03 5.9000E-02
 MZ 1.1085E+04 5.0000E-03

62 END-J

FX	1.0398E+03	5.0000E-03
FY	4.7547E+02	5.0000E-03
FZ	4.6626E+02	5.9000E-02
TX	9.9202E+01	5.9000E-02
MY	1.0226E+03	5.9000E-02
MZ	1.4613E+03	5.0000E-03

63 END-I

FX	2.4420E+02	5.0000E-03
FY	1.4619E+02	5.0000E-03
FZ	1.8260E+02	5.9000E-02
TX	6.4565E-11	3.8000E-02
MY	1.8253E+03	5.9000E-02
MZ	1.4613E+03	5.0000E-03

63 END-J

FX	2.4420E+02	5.0000E-03
FY	1.4619E+02	5.0000E-03
FZ	1.8260E+02	5.9000E-02
TX	6.4565E-11	3.8000E-02
MY	9.9922E-10	3.6000E-02
MZ	9.4251E-11	2.9300E-01

64 END-I

FX	1.0926E+04	1.5000E-02
FY	2.1331E+02	4.8000E-02
FZ	1.6053E+04	3.6000E-02
TX	7.2583E+02	3.9000E-02
MY	9.2739E+05	3.5000E-02
MZ	1.0143E+04	8.2800E-01

64 END-J

FX	1.0926E+04	1.5000E-02
FY	2.1331E+02	4.8000E-02
FZ	1.6053E+04	3.6000E-02
TX	7.2583E+02	3.9000E-02
MY	6.7304E+05	3.5000E-02
MZ	7.6855E+03	8.2800E-01

65 END-I

FX	1.0906E+04	1.5000E-02
FY	2.1094E+02	4.8000E-02
FZ	1.5960E+04	3.6000E-02
TX	7.2583E+02	3.9000E-02
MY	6.7304E+05	3.5000E-02
MZ	7.6855E+03	8.2800E-01

65 END-J

FX	1.0906E+04	1.5000E-02
FY	2.1094E+02	4.8000E-02
FZ	1.5960E+04	3.6000E-02
TX	7.2583E+02	3.9000E-02
MY	6.2558E+05	3.5000E-02
MZ	7.2249E+03	8.2800E-01

66 END-I

FX	1.0842E+04	1.5000E-02
FY	2.0351E+02	4.8000E-02
FZ	1.5679E+04	3.6000E-02

		TX	7.2583E+02	3.9000E-02
		MY	6.2558E+05	3.5000E-02
		MZ	7.2249E+03	8.2800E-01
66	END-J	FX	1.0842E+04	1.5000E-02
		FY	2.0351E+02	4.8000E-02
		FZ	1.5679E+04	3.6000E-02
		TX	7.2583E+02	3.9000E-02
		MY	5.3216E+05	3.5000E-02
		MZ	6.9386E+03	4.4000E-02
67	END-I	FX	1.0747E+04	1.5000E-02
		FY	1.9264E+02	4.8000E-02
		FZ	1.5287E+04	3.6000E-02
		TX	7.2583E+02	3.9000E-02
		MY	5.3216E+05	3.5000E-02
		MZ	6.9386E+03	4.4000E-02
67	END-J	FX	1.0747E+04	1.5000E-02
		FY	1.9264E+02	4.8000E-02
		FZ	1.5287E+04	3.6000E-02
		TX	7.2583E+02	3.9000E-02
		MY	4.4737E+05	6.0000E-02
		MZ	6.7992E+03	5.9000E-02
68	END-I	FX	1.0279E+04	1.5000E-02
		FY	1.5063E+02	8.2800E-01
		FZ	1.3670E+04	3.5000E-02
		TX	7.2583E+02	3.9000E-02
		MY	4.4737E+05	6.0000E-02
		MZ	6.7992E+03	5.9000E-02
68	END-J	FX	1.0279E+04	1.5000E-02
		FY	1.5063E+02	8.2800E-01
		FZ	1.3670E+04	3.5000E-02
		TX	7.2583E+02	3.9000E-02
		MY	2.3410E+05	6.0000E-02
		MZ	5.7645E+03	5.9000E-02
69	END-I	FX	8.7725E+03	1.5000E-02
		FY	1.3503E+02	5.4500E-01
		FZ	1.2790E+04	6.0000E-02
		TX	2.0630E-08	3.4000E-02
		MY	2.1749E+05	6.0000E-02
		MZ	2.2960E+03	5.4500E-01
69	END-J	FX	8.7725E+03	1.5000E-02
		FY	1.3503E+02	5.4500E-01
		FZ	1.2790E+04	6.0000E-02
		TX	2.0630E-08	3.4000E-02
		MY	2.3084E-06	2.2000E-02
		MZ	6.6105E-08	4.3600E-01
70	END-I	FX	1.2334E+02	1.5000E-02

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		FY	7.5110E+02	1.5000E-02
		FZ	1.2488E+03	3.7000E-02
		TX	8.2025E+03	6.0000E-02
		MY	2.0963E+04	3.7000E-02
		MZ	1.8097E+04	1.5000E-02
70	END-J	FX	1.2334E+02	1.5000E-02
		FY	7.5110E+02	1.5000E-02
		FZ	1.2488E+03	3.7000E-02
		TX	8.2025E+03	6.0000E-02
		MY	7.5643E+03	6.1000E-02
		MZ	1.0022E+04	1.5000E-02
71	END-I	FX	1.2296E+02	1.5000E-02
		FY	5.3132E+02	1.5000E-02
		FZ	7.0848E+02	3.7000E-02
		TX	8.2025E+03	6.0000E-02
		MY	7.5643E+03	6.1000E-02
		MZ	1.0022E+04	1.5000E-02
71	END-J	FX	1.2296E+02	1.5000E-02
		FY	5.3132E+02	1.5000E-02
		FZ	7.0848E+02	3.7000E-02
		TX	8.2025E+03	6.0000E-02
		MY	6.4550E+03	6.0000E-02
		MZ	7.5732E+03	1.5000E-02
72	END-I	FX	1.2259E+02	1.5000E-02
		FY	3.5425E+02	1.5000E-02
		FZ	4.3033E+02	6.0000E-02
		TX	8.2025E+03	6.0000E-02
		MY	6.4550E+03	6.0000E-02
		MZ	7.5732E+03	1.5000E-02
72	END-J	FX	1.6380E+02	1.5000E-02
		FY	3.3718E+02	1.5000E-02
		FZ	4.3033E+02	6.0000E-02
		TX	3.1263E+03	6.0000E-02
		MY	5.8000E+03	6.0000E-02
		MZ	3.2773E+03	1.5000E-02
72	END-J	FX	3.5425E+02	1.5000E-02
		FY	1.2259E+02	1.5000E-02
		FZ	4.3033E+02	6.0000E-02
		TX	2.8545E-10	3.4000E-02
		MY	1.7556E+03	5.9000E-02
		MZ	4.2065E+02	1.5000E-02
73	END-I	FX	8.1332E+01	1.5000E-02
		FY	4.2081E+01	1.5000E-02
		FZ	1.7563E+02	5.9000E-02
		TX	2.5018E-10	2.6000E-02
		MY	1.7556E+03	5.9000E-02
		MZ	4.2065E+02	1.5000E-02

73	END-J	FX	8.1332E+01	1.5000E-02
		FY	4.2081E+01	1.5000E-02
		FZ	1.7563E+02	5.9000E-02
		TX	2.5018E-10	2.6000E-02
		MY	7.7445E-10	6.2000E-02
		MZ	1.6138E-10	7.1000E-01
74	END-I	FX	1.2578E+02	1.6000E-02
		FY	7.5514E+02	1.5000E-02
		FZ	1.2322E+03	3.7000E-02
		TX	8.4225E+03	5.9000E-02
		MY	2.0698E+04	3.6000E-02
		MZ	1.8244E+04	1.5000E-02
74	END-J	FX	1.2578E+02	1.6000E-02
		FY	7.5514E+02	1.5000E-02
		FZ	1.2322E+03	3.7000E-02
		TX	8.4225E+03	5.9000E-02
		MY	7.7355E+03	6.0000E-02
		MZ	1.0125E+04	1.5000E-02
75	END-I	FX	1.2641E+02	1.6000E-02
		FY	5.3487E+02	1.5000E-02
		FZ	6.9900E+02	3.6000E-02
		TX	8.4225E+03	5.9000E-02
		MY	7.7355E+03	6.0000E-02
		MZ	1.0125E+04	1.5000E-02
75	END-J	FX	1.2641E+02	1.6000E-02
		FY	5.3487E+02	1.5000E-02
		FZ	6.9900E+02	3.6000E-02
		TX	8.4225E+03	5.9000E-02
		MY	6.6346E+03	6.0000E-02
		MZ	7.6598E+03	1.5000E-02
76	END-I	FX	1.2683E+02	1.6000E-02
		FY	3.5721E+02	1.5000E-02
		FZ	4.4230E+02	6.0000E-02
		TX	8.4225E+03	5.9000E-02
		MY	6.6346E+03	6.0000E-02
		MZ	7.6598E+03	1.5000E-02
76	END-J	FX	1.6432E+02	1.5000E-02
		FY	3.4086E+02	1.5000E-02
		FZ	4.4230E+02	6.0000E-02
		TX	3.2122E+03	5.9000E-02
		MY	5.9556E+03	5.9000E-02
		MZ	3.3265E+03	1.6000E-02
76	END-J	FX	3.5721E+02	1.5000E-02
		FY	1.2683E+02	1.6000E-02
		FZ	4.4230E+02	6.0000E-02
		TX	1.8969E-10	2.1700E-01
		MY	1.7992E+03	5.9000E-02

		MZ	4.3676E+02	1.6000E-02
77	END-I	FX	8.2013E+01	1.5000E-02
		FY	4.3694E+01	1.6000E-02
		FZ	1.7999E+02	5.9000E-02
		TX	2.3928E-11	3.7000E-02
		MY	1.7992E+03	5.9000E-02
		MZ	4.3676E+02	1.6000E-02
77	END-J	FX	8.2013E+01	1.5000E-02
		FY	4.3694E+01	1.6000E-02
		FZ	1.7999E+02	5.9000E-02
		TX	2.3928E-11	3.7000E-02
		MY	1.7951E-09	3.5000E-02
		MZ	1.4667E-10	2.7700E-01
78	END-I	FX	3.1317E+04	5.0000E-03
		FY	2.3339E+02	7.6900E-01
		FZ	1.5287E+04	3.5000E-02
		TX	5.1288E+02	4.0000E-02
		MY	8.9221E+05	3.4000E-02
		MZ	1.3645E+04	7.6900E-01
78	END-J	FX	3.1317E+04	5.0000E-03
		FY	2.3339E+02	7.6900E-01
		FZ	1.5287E+04	3.5000E-02
		TX	5.1288E+02	4.0000E-02
		MY	6.5103E+05	3.4000E-02
		MZ	9.9114E+03	7.6900E-01
79	END-I	FX	3.1257E+04	5.0000E-03
		FY	2.3276E+02	7.6900E-01
		FZ	1.5207E+04	3.5000E-02
		TX	5.1288E+02	4.0000E-02
		MY	6.5103E+05	3.4000E-02
		MZ	9.9114E+03	7.6900E-01
79	END-J	FX	3.1257E+04	5.0000E-03
		FY	2.3276E+02	7.6900E-01
		FZ	1.5207E+04	3.5000E-02
		TX	5.1288E+02	4.0000E-02
		MY	6.0599E+05	3.4000E-02
		MZ	9.2131E+03	7.6900E-01
80	END-I	FX	3.1072E+04	5.0000E-03
		FY	2.3080E+02	7.6900E-01
		FZ	1.4964E+04	3.5000E-02
		TX	5.1288E+02	4.0000E-02
		MY	6.0599E+05	3.4000E-02
		MZ	9.2131E+03	7.6900E-01
80	END-J	FX	3.1072E+04	5.0000E-03
		FY	2.3080E+02	7.6900E-01
		FZ	1.4964E+04	3.5000E-02

		TX	5.1288E+02	4.0000E-02
		MY	5.1713E+05	3.4000E-02
		MZ	8.0732E+03	4.8800E-01
81	END-I	FX	3.0799E+04	5.0000E-03
		FY	2.2781E+02	7.6900E-01
		FZ	1.4621E+04	3.5000E-02
		TX	5.1288E+02	4.0000E-02
		MY	5.1713E+05	3.4000E-02
		MZ	8.0732E+03	4.8800E-01
81	END-J	FX	3.0799E+04	5.0000E-03
		FY	2.2781E+02	7.6900E-01
		FZ	1.4621E+04	3.5000E-02
		TX	5.1288E+02	4.0000E-02
		MY	4.2075E+05	3.4000E-02
		MZ	6.8878E+03	4.8800E-01
82	END-I	FX	2.9453E+04	5.0000E-03
		FY	2.1309E+02	7.6900E-01
		FZ	1.3241E+04	3.4000E-02
		TX	5.1288E+02	4.0000E-02
		MY	4.2075E+05	3.4000E-02
		MZ	6.8878E+03	4.8800E-01
82	END-J	FX	2.9453E+04	5.0000E-03
		FY	2.1309E+02	7.6900E-01
		FZ	1.3241E+04	3.4000E-02
		TX	5.1288E+02	4.0000E-02
		MY	2.0523E+05	6.0000E-02
		MZ	5.9977E+03	5.9000E-02
83	END-I	FX	2.5158E+04	5.0000E-03
		FY	1.9301E+02	7.6900E-01
		FZ	1.1189E+04	6.0000E-02
		TX	1.8458E-08	4.4000E-02
		MY	1.9025E+05	6.0000E-02
		MZ	3.2619E+03	7.6900E-01
83	END-J	FX	2.5158E+04	5.0000E-03
		FY	1.9301E+02	7.6900E-01
		FZ	1.1189E+04	6.0000E-02
		TX	1.8458E-08	4.4000E-02
		MY	3.2461E-06	1.6000E-02
		MZ	3.1313E-07	2.1900E-01
84	END-I	FX	3.4132E+02	5.0000E-03
		FY	2.1245E+03	5.0000E-03
		FZ	1.2027E+03	3.7000E-02
		TX	7.5423E+03	5.9000E-02
		MY	1.9761E+04	3.7000E-02
		MZ	5.0761E+04	5.0000E-03
84	END-J	FX	3.4132E+02	5.0000E-03

FY	2.1245E+03	5.0000E-03
FZ	1.2027E+03	3.7000E-02
TX	7.5423E+03	5.9000E-02
MY	7.3260E+03	3.3000E-02
MZ	2.7918E+04	5.0000E-03

85 END-I

FX	3.3640E+02	5.0000E-03
FY	1.4972E+03	5.0000E-03
FZ	6.6846E+02	3.7000E-02
TX	7.5423E+03	5.9000E-02
MY	7.3260E+03	3.3000E-02
MZ	2.7918E+04	5.0000E-03

85 END-J

FX	3.3640E+02	5.0000E-03
FY	1.4972E+03	5.0000E-03
FZ	6.6846E+02	3.7000E-02
TX	7.5423E+03	5.9000E-02
MY	5.8925E+03	6.0000E-02
MZ	2.1019E+04	5.0000E-03

86 END-I

FX	3.3233E+02	5.0000E-03
FY	9.9324E+02	5.0000E-03
FZ	3.6283E+02	6.0000E-02
TX	7.5423E+03	5.9000E-02
MY	5.8925E+03	6.0000E-02
MZ	2.1019E+04	5.0000E-03

86 END-J

FX	4.6733E+02	5.0000E-03
FY	9.3732E+02	5.0000E-03
FZ	3.9282E+02	6.0000E-02
TX	2.8987E+03	5.9000E-02
MY	5.3322E+03	5.9000E-02
MZ	9.0242E+03	5.0000E-03

86 END-J

FX	9.9324E+02	5.0000E-03
FY	3.3233E+02	5.0000E-03
FZ	3.9282E+02	6.0000E-02
TX	2.6700E-10	1.8000E-02
MY	1.6650E+03	5.9000E-02
MZ	1.1355E+03	5.0000E-03

87 END-I

FX	2.2804E+02	5.0000E-03
FY	1.1360E+02	5.0000E-03
FZ	1.6656E+02	5.9000E-02
TX	3.9481E-11	2.7000E-02
MY	1.6650E+03	5.9000E-02
MZ	1.1355E+03	5.0000E-03

87 END-J

FX	2.2804E+02	5.0000E-03
FY	1.1360E+02	5.0000E-03
FZ	1.6656E+02	5.9000E-02
TX	3.9481E-11	2.7000E-02
MY	8.7561E-10	2.2000E-02
MZ	1.6579E-10	1.5140E+00

88 END-I
 FX 3.4551E+02 5.0000E-03
 FY 2.1703E+03 5.0000E-03
 FZ 1.2030E+03 3.7000E-02
 TX 7.4624E+03 6.0000E-02
 MY 1.9945E+04 3.6000E-02
 MZ 5.2334E+04 5.0000E-03

88 END-J
 FX 3.4551E+02 5.0000E-03
 FY 2.1703E+03 5.0000E-03
 FZ 1.2030E+03 3.7900E-02
 TX 7.4624E+03 6.0000E-02
 MY 7.4561E+03 3.4000E-02
 MZ 2.8999E+04 5.0000E-03

89 END-I
 FX 3.4998E+02 5.0000E-03
 FY 1.5373E+03 5.0000E-03
 FZ 6.7408E+02 3.6000E-02
 TX 7.4424E+03 5.0000E-02
 MY 7.4561E+03 3.4000E-02
 MZ 2.8599E+04 5.0000E-03

89 END-J
 FX 3.4998E+02 5.0000E-03
 FY 1.5373E+03 5.0000E-03
 FZ 6.7408E+02 3.6000E-02
 TX 7.4424E+03 6.0000E-02
 MY 5.8094E+03 6.0000E-02
 MZ 2.1915E+04 5.0000E-03

90 END-I
 FX 3.5324E+02 5.0000E-03
 FY 1.0264E+03 5.0000E-03
 FZ 3.8729E+02 6.0000E-02
 TX 7.4624E+03 6.0000E-02
 MY 5.8094E+03 6.0000E-02
 MZ 2.1915E+04 5.0000E-03

90 END-J
 FX 4.7503E+02 5.0000E-03
 FY 9.7559E+02 5.0000E-03
 FZ 3.8729E+02 6.0000E-02
 TX 2.8563E+03 6.0000E-02
 MY 5.2526E+03 6.0000E-02
 MZ 9.4762E+03 5.0000E-03

90 END-J
 FX 1.0264E+03 5.0000E-03
 FY 3.5324E+02 5.0000E-03
 FZ 3.8729E+02 6.0000E-02
 TX 4.3092E-11 5.5000E-02
 MY 1.6550E+03 1.6000E-02
 MZ 1.2199E+03 5.0000E-03

91 END-I
 FX 2.3566E+02 5.0000E-03
 FY 1.2204E+02 5.0000E-03
 FZ 1.6557E+02 3.6000E-02
 TX 1.6056E-11 5.3000E-02

MY 1.6550E+03 1.6000E-02
MZ 1.2199E+03 5.0000E-03

91 END-J

FX 2.3566E+02 5.0000E-03
FY 1.2206E+02 5.0000E-03
FZ 1.6557E+02 1.6000E-02
TX 1.6056E-11 3.3000E-02
MY 5.1733E-10 2.7000E-02
MZ 3.1541E-10 1.4810E+00

92 END-I

FX 2.9179E+03 6.0000E-03
FY 2.1716E+02 6.9000E-02
FZ 6.0000E+03 1.6000E-02
TX 3.0000E-10 2.5000E-02
MY 2.0475E+05 1.6000E-02
MZ 7.1709E+03 6.9000E-02

92 END-J

FX 2.9179E+03 6.0000E-03
FY 2.1716E+02 6.9000E-02
FZ 6.2399E+03 1.6000E-02
TX 3.5649E-10 2.5000E-02
MY 1.0510E+05 1.6000E-02
MZ 3.6972E+03 6.9000E-02

93 END-I

FX 2.7657E+03 6.0000E-03
FY 2.0804E+02 6.9000E-02
FZ 5.9620E+03 1.6000E-02
TX 1.2203E-11 1.1100E-01
MY 1.0510E+05 1.6000E-02
MZ 3.6972E+03 6.9000E-02

93 END-J

FX 2.7657E+03 6.0000E-03
FY 2.0804E+02 6.9000E-02
FZ 5.9620E+03 1.6000E-02
TX 1.2203E-11 1.1100E-01
MY 8.5709E+04 1.6000E-02
MZ 3.0207E+03 6.9000E-02

END-I

FX 1.7267E+03 6.0000E-03
FY 1.4306E+02 6.9000E-02
FZ 4.0613E+03 1.6000E-02
TX 4.9140E-12 4.3800E-01
MY 8.5709E+04 1.6000E-02
MZ 3.0207E+03 6.9000E-02

94 END-J

FX 1.7267E+03 6.0000E-03
FY 1.4306E+02 6.9000E-02
FZ 4.0613E+03 1.6000E-02
TX 4.9140E-12 4.3800E-01
MY 8.8376E+03 5.0000E-03
MZ 3.1174E+02 6.9000E-02

95 END-I

FX 5.0763E+02 6.0000E-03
FY 4.4550E+01 6.9000E-02

FZ 1.26318+03 5.0000E-03
TX 6.83658-12 1.5000E-02
MY 8.83658+03 5.0000E-03
MZ 3.11748+02 6.9000E-02

FX 5.07638+02 6.0000E-03
FY 4.45608+01 6.9000E-02
FZ 1.26318+03 5.0000E-03
TX 6.83658-12 1.5000E-02
MY 1.91128-10 1.5000E-02
MZ 3.59018-10 1.7000E-02

END-J

f5